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## Table of Contents.

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ORIGINAL ARTICLES—	Page.	POST-GRADUATE WORK—	Page.
Army Medical Services in New South Wales Prior to Federation, by A. M. McIntosh .. .	485	The Melbourne Permanent Post-Graduate Committee .. .	515
Some Factors Predisposing to Juvenile Rheumatic Fever in Sydney, by Joan Storey .. .	492	The University of Queensland Post-Graduate Medical Education Committee .. .	516
REPORTS OF CASES—		CONGRESS NOTES .. .	518
Treatment of <i>Hæmophilus Influenzæ</i> Meningitis with Streptomycin, by Trevor Williams .. .	502	CORRESPONDENCE—	
REVIEWS—		Standards at the University of Sydney Medical School .. .	517
A Year Book of Therapeutics .. .	503	A Basic Routine for Post-Operative Treatment after Laparotomy .. .	517
Treatment of the Eye in the Consulting Room .. .	503	Egg Laying by Hens .. .	517
Cancer of the Breast .. .	504	OBITUARY—	
Chronic Diseases .. .	504	Alfred Jefferis Turner .. .	517
Neurotic Illness .. .	504	Robert Percival Hodgson .. .	519
A Year Book on Diseases of the Eye, Ear, Nose and Throat .. .	504	Walter Sheffield Harvison .. .	520
LEADING ARTICLES—		Albert Edward Platt .. .	520
The Progress of Public Health .. .	505	NOMINATIONS AND ELECTIONS .. .	520
CURRENT COMMENT—		AN APPEAL .. .	520
Severe Forms of Infective Hepatitis .. .	506	MEDICAL APPOINTMENTS .. .	520
Disseminated Sclerosis .. .	507	BOOKS RECEIVED .. .	520
Reactions to Bacterial Antigens .. .	507	DIARY FOR THE MONTH .. .	520
ABSTRACTS FROM MEDICAL LITERATURE—		MEDICAL APPOINTMENTS: IMPORTANT NOTICE .. .	520
Therapeutics .. .	508	EDITORIAL NOTICES .. .	520
Neurology and Psychiatry .. .	509		
BRITISH MEDICAL ASSOCIATION NEWS—			
Annual Meeting .. .	510		

### ARMY MEDICAL SERVICES IN NEW SOUTH WALES PRIOR TO FEDERATION.<sup>1</sup>

By A. M. MCINTOSH,  
*President of the New South Wales Branch of the  
British Medical Association.*

I AM very appreciative of the distinction conferred on me by my election as your President for the ensuing year. I could wish for no greater honour. My year of office promises to be one of extreme importance, both to the Association and to its individual members. Apart from the complex problems of world affairs, we are threatened with a limitation of our freedom of action in our professional careers which will be intolerable. To this threat we must oppose the utmost unanimity and fullest loyalty to the Association, if we are to prevent a great disservice, not only to ourselves but also to the community at large.

One of the first duties devolving on your incoming President is the selection of a subject for the address which established custom requires of him.

To me this has been more than usually difficult owing to the somewhat specialized duty I have been carrying out during the past eight years. I therefore welcomed the suggestion of Dr. John Hunter that, with this address in view, I should investigate early records of the Army Medical Services in New South Wales.

The results of my researches I present to you this evening.

The King's Colour which was unveiled in this hall on April 24, 1941, by Major-General Eames, was presented to the Australian Army Medical Corps by the King Emperor in recognition of services rendered in South Africa (1899-1902). Having been duly consecrated, it had been handed over in Melbourne on November 15,

1904, by the Governor-General to representatives of the Australian Army Medical Corps who had served in South Africa with the New South Wales Army Medical Corps. The New South Wales Army Medical Corps supplied all the formed medical units from Australia which were actively engaged in the second Boer War. The participation of the other colonies as regards medical personnel was limited to the provision of regimental medical officers for units raised therein, a few sisters, an occasional specialist (notably Sir Thomas Fitzgerald from Melbourne and Professor Watson from Adelaide) and a share in the Australian Army Medical Corps contingent sent after the formation of the Commonwealth, and composed of personnel from all the States. It did not arrive in South Africa until just before the cessation of hostilities. The performance of the New South Wales Medical Corps was full of merit and won general commendation. It was a triumph for the man who had laboured steadily and enthusiastically for seventeen years to train it to a high state of efficiency and who subsequently established the Australian Army Medical Corps on a firm foundation—W. D. C. Williams. I propose this evening, within the limits of time allotted, to trace the gradual development of the Army Medical Services in New South Wales until they were merged in the Australian Army Medical Corps.

#### The Early Days of the Colony.

Accompanying the first fleet in 1788 there were, for the maintenance of order, three companies of the Royal Marine Light Infantry numbering 212 members. Their medical care was part of the duty of the five officers who were appointed to remain as the medical staff of the Colony. Any patients disembarked from the fleet were treated in tents. At first the health of the community was good, but scurvy soon broke out in a virulent form. The first hospital was erected on the western side of Sydney Cove in February, 1788, and was filled immediately on completion. Tents were necessary to house the overflow. Conditions were difficult as equipment was deficient and many of the drugs had deteriorated. It was there-

<sup>1</sup>Read at the annual meeting of the New South Wales Branch of the British Medical Association on March 24, 1948.

fore necessary to explore local resources and Denis Conisden "became the pioneer of pharmaceutical research and discovered the anti-scorbutic properties of the native Sarsaparilla and the value of an infusion of wild myrtle in the treatment of dysentery". He also claimed the credit of discovering eucalyptus oil and its therapeutic application (which John White, the first Principal Surgeon, also claimed). Specimens of all these he sent to Sir Joseph Banks.<sup>(3)</sup>

The *Justinian* of the Second Fleet brought, in 1790, a portable hospital which was erected with the utmost speed, as the ships of the convoy disembarked nearly 500 patients and accommodation was temporarily more inadequate than ever. During Hunter's regime William Balmain, who had succeeded John White as Principal Surgeon to the Colony, reerected the hospital on a stone foundation near the old Argyle Cut and built also a new dispensary and a hospital store. Further accommodation was provided in 1797 by the erection of a military hospital and dispensary near the site of the present observatory.

With the Second Fleet came the New South Wales Corps to relieve the Marines. Its medical officer was John Harris who played a prominent part in the early history of the settlement. He was the first army medical officer in New South Wales and in 1791 was stationed at Parramatta. His interest in medicine gradually diminished, however, and he devoted himself rather to various administrative posts in the Colony, magistrate, naval officer, deputy judge advocate. He remained in the Colony after the departure of the New South Wales Corps, acquired considerable wealth and died in 1838, aged eighty-five years.

There was no further provision for hospital accommodation until Lachlan Macquarie's arrival on the last day of 1809. He found the hospital "in a most ruinous state and very unfit for the reception of the sick that must necessarily be sent to it"<sup>(4)</sup> and on May 17, 1810, invited tenders for the building of a general hospital. The only tender, which was accepted, was an offer to build the hospital for a virtual monopoly in the importation of rum for three years with permission to import 45,000 gallons. There were other less valuable considerations in the way of provision of convict labour, use of Government bullocks and an allowance of fresh meat. Traffic in rum had been initiated by the New South Wales Corps and was firmly established in the interregnum between Phillip and Hunter (1792-1795) when the senior officers of the Corps administered the Colony. All commodities were derived from the King's Store and were issued at cost, in quantities varying with their rank, to military and civil authorities who subsequently disposed of them at enormous profits. The official class thus became powerful monopolists who were able successfully to oppose the will of successive governors and actually to depose Bligh. Of all commodities rum was the most important and became the currency, with resultant deterioration in the moral standard of the Colony. Macquarie took immediate steps to control this traffic by the levying of an import duty and the licensing of vendors, but most effectively by the return to England in May, 1810, of the New South Wales Corps. One of the contractors for the building of the hospital was D'Arcy Wentworth, the acting Principal Surgeon. Building commenced in 1811 and was completed in 1816. The first medical staff consisted of D'Arcy Wentworth, as official head of the hospital, and William Redfern, who had the responsibility of the immediate care of patients. R. W. Owen was appointed acting assistant surgeon in 1817.

Of the three, Owen was the best qualified. He had a diploma of the Royal College of Surgeons. D'Arcy Wentworth, after an adventurous and not too creditable early life which included some training in surgery, had come to the Colony with the Second Fleet. He was sent to Norfolk Island to assist Surgeon Jamison and there his more famous son, William Charles, was born. In 1796 he was appointed an assistant surgeon and in 1811 Principal Surgeon, although he had no professional qualification. He did, however, have powerful friends. Macquarie made him also Chief of Police and his administrative

duties seem to have occupied all his time. He, with Redfern and others, founded the Bank of New South Wales. He died in 1827.

William Redfern owed his presence in the Colony to an indiscreet sympathy with the participants in the mutiny of the *Nore*, for which he was transported. Useful service at Norfolk Island secured for him an early pardon in 1803. He had passed examinations in England but had no diploma. He offered to submit to a medical examination in Sydney and a board of examiners was constituted, which, in September, 1808, granted him one. Although Redfern impressed Macquarie, the fact that he was an emancipist impeded his preferment in the official medical service, from which he resigned in 1818 to devote himself entirely to private practice. In this he was very successful, but his interests in pastoral and viticultural pursuits became increasingly attractive and he retired from practice in 1826. He died in Edinburgh in 1833.

Amongst the public buildings erected by Macquarie were brick barracks, providing accommodation for 1000 soldiers, with all necessary offices and outbuildings and a parade ground of about 12 acres. These occupied an area bounded approximately by what are now George, Barrack, Clarence and Margaret Streets. He also erected "a military hospital, brick built, two stories high, having upper and lower verandahs with all the necessary out offices for the accommodation of 100 patients; the whole being enclosed with a stone wall or stockade and a brick built barracks for the accommodation of the military surgeon and one assistant surgeon".<sup>(5)</sup> This hospital replaced that built in 1797 and occupied the same site.

After the departure of the New South Wales Corps, Sydney was for sixty years one of the garrison stations of the Empire, in which a succession of British regiments served. Their duties consisted mainly of police work, and many of them were represented only by companies. They were constantly depleted by detachments for more active service in India, New Zealand and elsewhere, as well as for duty in other parts of the Colony. Most of them were accompanied by their own regimental medical officers whose names appear after 1839 on the register of the New South Wales Medical Board.

As the population of Sydney increased it became more and more obvious that the barracks on their existing site were an impediment to the expansion and development of the city, and after prolonged negotiation it was decided that new barracks would be erected at Paddington. The existing barracks site and buildings were ceded to the Colonial Government, which provided £60,000 towards the erection of the new army accommodation. The erection of the original buildings of the present Victoria Barracks commenced in 1841 and was completed in 1848.

Difficulty arose about the military hospital building. In 1836 the general hospital was brought under military control, although there was no change in the class of patients treated there, and the south wing was occupied by the Army Ordnance Department as a medical depot. When the change in location of the barracks was proposed, Major Barney, the Chief Engineer, asked for the south wing as a military hospital.<sup>(6)</sup> A rival application for the same accommodation came from the Sydney Dispensary, an organization which originated in 1826 largely owing to the efforts of Dr. W. Bland. Its purpose was to provide a medical service for the pauper sick, for whom there was no other provision outside the convict hospital. It organized an out-patient clinic and, where necessary, arranged visits to patients in their own homes. The Army Ordnance Department refused to relinquish its claim to the building and the decision was finally left by Lord John Russell with the Lords of the Treasury, who decided in favour of the Dispensary,<sup>(7)</sup> which occupied the south wing in March, 1843. It was then decided to include a military hospital in the general scheme at Paddington, which surely was a more convenient arrangement. The garrison hospital thus provided was utilized by Imperial troops until 1870 and thereafter in succession by New South Wales and Australian army personnel until 1930. It is now occupied as a Staff Corps mess. The military hospital erected by Macquarie in the "Fort Phillip" area,

together with the land on which it stood, was ceded to the Colonial Government in return for the erection of this hospital. It was appropriated for school purposes in 1849, remodelled within and without, and became the nucleus of the buildings of the original Fort Street School.

#### The Development of the Volunteer Force.

The local authorities were acutely aware of their exposure to attack, but their efforts were for long confined to the erection of small fortifications in the immediate vicinity of the settlement and on adjacent headlands. Of these the most important was a "citadel", Fort Phillip, on the heights above Dawes Point. How inadequate they were was shown in 1839, when two United States cruisers were discovered one morning anchored off Circular Quay—they having moved up the harbour in the night quite unobserved. Even in the early days of the settlement it had been necessary to form a small volunteer force known as the Loyal Sydney and Parramatta Association to aid the regular troops in suppressing convict risings. Formed in 1801, it was rarely utilized and finally disbanded in 1810. The first definite attempt to form a volunteer corps was due to the outbreak of the Crimean War (1854). The enthusiasts who formed it provided their own uniforms and equipment, but when the war terminated the stimulus vanished and the force practically disappeared. Possibility of war with France in 1860 evoked fresh enthusiasm and a new force was formed with more liberal Government support. The remainder of the early corps was absorbed and in 1862 there were 2000 riflemen with a small force of cavalry and artillery.

The Home Government became increasingly reluctant to maintain, much less strengthen, the garrison in Australia, particularly when transportation of convicts ceased in 1841. Appeals for loans or troops to strengthen defences produced the rejoinder that: (a) if the Colonies wanted more forts they should build them themselves; (b) if an artillery force was needed it should be created from local resources. The Legislative Council resisted until assured that they would have control of the Colony's finances. Meantime, all barracks and military buildings were handed over to the Colonial Government with a proviso that, if the buildings were not suitably maintained, the reduced garrison force would be withdrawn. In 1863 the Colonies were further informed that naval defence was the limit of Britain's contribution, but that for land defence she would lend infantry to the Colonies on a per-capita payment basis, but without any guarantee of nonwithdrawal in emergency. To this latter proviso the Colonies strenuously objected and insisted that artillery should be substituted for infantry. Further discussion proceeded for some years until 1870 when it was finally agreed that naval defence of the coast line and commerce was an imperial responsibility, but that military protection was a matter for the Colonies, and in the same year the last of the British troops left Sydney.<sup>(2)</sup> For some years prior to this these units had never been at full strength and accordingly, faced with a waning volunteer force and the imminent necessity for providing for its own defence, the Government in 1867 passed the *Volunteer Forces Regulation Act*. One of its clauses provided for a grant of 50 acres to each volunteer with five years' continuous and efficient service. This led to an increase in the number of recruits, although the quality of the personnel offering deteriorated, particularly when transfer of these grants was permitted. Abuses became so frequent that in 1874 the land grants were withdrawn, and thereafter recruiting temporarily waned. After the withdrawal of the British troops it was obvious that the defence of the Colony could not be left entirely to volunteers and accordingly, in 1870, a battery of artillery and two companies of infantry were formed as permanent full-time troops. The latter disbanded within two years and the artillery, later augmented, was for some years the only permanent force. In 1871 W. J. G. Bedford was appointed staff surgeon to the regular artillery. He lived in Victoria Barracks and was thus the first officer in medical charge of New South Wales permanent troops. Medical officers had participated in the Volunteer Force

and already in 1870 there were enrolled one staff surgeon, five surgeons and eleven assistant surgeons who were posted to volunteer rifle and artillery units in the metropolis and country towns.

#### Medical Officers of the Volunteer Force, 1870.

- I. Aaron, Honorary Staff Surgeon, Principal Medical Officer.
  - J. C. Cox, Surgeon, Artillery Brigade, Sydney.
  - J. M. Nolan, Assistant Surgeon, Artillery Brigade, Sydney.
  - F. Milford, Surgeon, Volunteer Rifles, Sydney (First Battalion).
  - G. F. Dansey, Assistant Surgeon, Volunteer Rifles, Sydney (First Battalion).
  - R. D. Ward, Surgeon, Volunteer Rifles, Sydney (Second Battalion).
  - W. Shaw, Assistant Surgeon, Volunteer Rifles, Sydney (Second Battalion).
  - W. J. Anderson, Honorary Assistant Surgeon, Volunteer Rifles, Sydney (Number 1 Company, Highlanders).
  - J. J. Smith, Honorary Assistant Surgeon, Volunteer Rifles, Sydney (Number 2 Company, Highlanders).
  - Thomas Wilmot, Surgeon, Volunteer Rifles, Penrith.
  - H. Day, Surgeon, Volunteer Rifles, Hawkesbury.
  - R. R. Bowker, Assistant Surgeon, Volunteer Artillery, Newcastle.
  - C. W. Morgan, Honorary Assistant Surgeon, Volunteer Rifles, Bathurst.
  - Henry Glennie, Honorary Assistant Surgeon, Volunteer Rifles, Singleton.
  - W. H. Hayley, Honorary Assistant Surgeon, Volunteer Rifles, Goulburn.
  - Augustus Wells, Honorary Assistant Surgeon, Volunteer Rifles, Newcastle.
  - John Pierce, Honorary Assistant Surgeon, Volunteer Rifles, Maitland.
  - O. S. Evans, Surgeon, Naval Brigade, Sydney.
  - A. K. Morson, Surgeon, Naval Brigade, West Maitland.
- An "Association of Medical Officers of the Volunteer Force" had been formed, which in 1870 established the *New South Wales Medical Gazette*; this was edited by three of their number: I. Aaron, F. Milford and R. D. Ward.

They apologized for their temerity:

The medical officers of the Volunteer Force being to a certain extent an organized body, and in the habit of meeting occasionally for the consideration of such matters as more particularly interested them, and finding there was otherwise no probability of anyone else attempting to establish what was acknowledged to be a desideratum, they resolved, though with considerable diffidence and hesitation, to put their own shoulders to the wheel.<sup>(3)</sup>

They were encouraged in their effort by the fact that one of their number, Isaac Aaron, had had previous editorial experience. Aaron had practised in Birmingham before he came to New South Wales in 1838. After living for a time in Raymond Terrace, where he combined farming with medical practice, he moved to Sydney and in 1846 was one of a syndicate which established the first *Australian Medical Journal* which was edited in the first instance by George Brooks, the Senior Colonial Surgeon of the day. In May, 1847, Aaron took over the ownership and editorship, but he lost money and publication ceased in October, 1847. This was the first purely medical journal published in Australia. It was not a very notable production, contained little original work and that not of high standard. Reprints and excerpts from articles published elsewhere, with local medical news, were its main interest.

After the first year the Association withdrew from the control of the *Gazette* which was not paying, and it was taken over and edited by F. Milford, one of the three original editors. This added responsibility was possibly one reason why Milford resigned from the Volunteer Force in 1871, after over ten years of service. At the same time Aaron, the Principal Medical Officer, also resigned. He also had had ten years' service and during



the greater part of that time was the first Principal Medical Officer of the Volunteer Force in New South Wales. In addition to his service with the army, Aaron had been secretary of the Australian Medical Association, an organization formed in December, 1858, under the presidency of Dr. W. Bland. Meetings were held monthly at which scientific papers were discussed and the membership reached '87, but interest waned, attendances diminished, and even reduction of the quorum to three in 1869 could not prevent its disbandment.

This happening was possibly one of the reasons which led to the publication of the *Gazette*, as there are in the early numbers occasional invidious comparisons between the members of the medical profession in New South Wales and those in Victoria where

... there are two Scientific Associations connected with the profession—the Medical Society of Victoria and the Medical Association of Victoria, the proceedings of which are always reported in both the Medical Journals which the neighbouring Colony supports and which are on intimate relations with the Associations. We believe that the only regular periodical meeting of Medical Men in Sydney is that held quarterly by the Medical Officers of the Volunteer Force at Headquarters, where medical gossip is talked, whist played, and supper consumed.<sup>(9)</sup>

Aaron died in 1877, aged seventy-three years. During the last eleven years of his life he was surgeon to Darlinghurst Gaol and the Reception House. In that capacity he was occasionally the subject of criticism in the legislature. After one particularly violent attack he chanced to meet his critic in the street and retaliated in such forceful terms that he was brought before the court and fined £2 8s. 6d. for the use of language "likely to provoke a breach of the peace which, however, did not do so".

Milford carried on the *Gazette* until April, 1875, although he was losing money, and handed over then to C. W. Morgan who was also a medical officer of the Volunteer Force. The final issue of the *Gazette* appeared in October of the same year. It really deserved a better fate, as it was a well conducted vigorous journal, containing many interesting original articles. It fought persistently and eventually with success for a new Medical Bill and constantly stressed the need for reform in public health administration—improvements in water supply, sewage disposal *et cetera*. References to army medical matters are few in spite of its association with the Volunteer Force. Early numbers gave details of the medical services of the French and German armies which were then being actively tested. That apart, the only references are to Easter encampments at Richmond or Campbellfields with remarks on the hygiene of the area, the occasional epidemics of dysentery, or the necessity for more careful examination of recruits with particular reference to the prevalence of epilepsy.

Milford, who died in 1902, had commenced his medical career as a student at the Sydney Infirmary from 1849 to 1852 before proceeding to England. He was editor of *The Australasian Medical Gazette* in the first year of its existence (1881) and was also an enthusiastic yachtsman. He was the first lecturer in surgery at the medical school of the University of Sydney, and was for a lengthy period an honorary surgeon at Saint Vincent's Hospital (1859-1886) and for a shorter period at Prince Alfred Hospital.

Aaron was succeeded as Principal Medical Officer by Robert Dalzell Ward, the first medical practitioner on the northern side of Sydney Harbour. In 1873 he retired and J. C. Cox, one of the earliest medical members of the Volunteer Force, became Principal Medical Officer. Cox, who also had been a student at the Sydney Infirmary (1850-1852), lived until 1912 and took a very prominent part in the medical and public life of Sydney. He was the first lecturer in medicine at the University of Sydney, and an honorary physician at Prince Alfred Hospital, a distinguished conchologist, a trustee of the Sydney Museum and a strong supporter of the Historical Society. His busy life did not permit his retention of his new

army appointment after 1875. In that year he resigned and was succeeded by George Frederick Dansey, who was Health Officer to the City of Sydney from 1870 until 1888 and who retained his association with the army for a further twenty years. What the exact duties of medical officers of the Volunteer Force were at this date, apart from examination of recruits and attendance at parades and annual camps, is not clear, but it is evident that in the years following Dansey's appointment enthusiasm waned, for in 1883 a correspondent of *The Australasian Medical Gazette* wrote:

The state of the medical staff of the Volunteer Force of the Colony is not satisfactory. At present it consists of two surgeons only, the P.M.O., Dr. Dansey, and one other, Dr. McDonagh, the calls on whose time in attendance on parades at the Rifle Range, etc., must in consequence of the paucity of their numbers be greater than men in private practice can afford. Should any call for real service arise the staff would have to be greatly increased and men, novices to the ordinary routine duties of Military Surgeons, appointed. As the officers are nearly, if not quite, honorary expense can hardly be the reason for this state of things.

In actual fact Dansey's remuneration was £60 *per annum*, that of McDonagh £40, with, in each case, an additional £25 for a horse. The outlook was indeed sombre, but it was the dark hour before the dawn, because in the same number of the *Gazette* there is a note that Dr. W. D. C. Williams, who had for a short period been carrying out the duties of the office, had been appointed Staff Surgeon to the New South Wales Permanent Artillery (October 1, 1883).

Williams was born in 1856 in Sydney where his father practised medicine. He acquired his medical education at the University College Medical School and was the medallist in surgery in his year. Returning to Sydney in 1871 he practised in Darlinghurst and was appointed an honorary surgeon to Saint Vincent's Hospital. With him, however, civil medical practice was always subsidiary to his army medical interests. It was not long before he had an opportunity to gain experience, meagre perhaps, of active service conditions and he eagerly accepted it.

#### The Sudan Contingent.

The murder of General Gordon at Khartoum in 1885 caused a wave of intense indignation throughout the community and when the Acting Premier of New South Wales, W. B. Dalley, anticipating the other Colonies, offered the British Government a force of 500 infantry and two batteries of artillery for service in the Sudan, volunteers greatly exceeded requirements. Although the Opposition questioned the legality of the offer, public opinion supported it strongly and considered that Australia "was raised to an equal companionship with the chivalrous nations of the earth". Only one battery of artillery was accepted in addition to the infantry offered and the force was rapidly enlisted after a strict medical examination of all recruits. An ambulance corps of thirty-four personnel with three medical officers formed part of the force. Staff Surgeon W. D. C. Williams was Principal Medical Officer with relative rank of major, and George Proudfoot and U. G. D. Glanville were surgeons with relative rank of captain. Five ambulance wagons and two wagons for equipment, one water cart and twenty-six horses were included. Enlistment commenced in February 16, 1885, and on March 3, 1885, the force embarked.

Arriving at Suakim on March 27, 1885, they were in action on April 3 at Matala where three were slightly wounded. They participated in other minor engagements, but their main function was in the preparation of areas for railway construction—work of slight hazard but carried out under conditions of dust and heat that were very irksome. The campaign closed rapidly owing to fear of involvement with Russia elsewhere and, after some discussion as to the possibility of employing Colonial troops in India, it was decided to send them home. The force embarked on May 17, 1885 (eleven patients being left in hospital), and on June 23 arrived in Sydney where it was enthusiastically received and immediately dis-



banded. Three deaths occurred in Africa from enteric fever and, of twelve patients who were left in Colombo in Proudfoot's care during the homeward voyage, three died from the same cause. All members of the ambulance corps returned safely.

This was the first occasion on which a colony had provided a military force to assist the mother country. The honour is shared by Canada who sent a special "Corps of Voyageurs" for duty in the advance up the Nile in the same campaign.

Proudfoot, who had been a resident medical officer at the Sydney Hospital and had subsequently practised at Girilambone, lived in Orange after his return from the Sudan and died there in 1890, aged thirty-one years.

Doyle Glanville had previously seen service with British troops in Zululand. After his return from the Sudan he was, in 1885, appointed to the staff of Major-General Sir Peter Scratchley, the newly appointed Commissioner for New Guinea. In 1887 he was registered in Victoria as practising in Melbourne.

Williams was mentioned in dispatches for his work in the Sudan. He subsequently visited England and attended a course of instruction in administration and training of the army medical service.

On his return to Sydney he recorded his impressions of "Military Hospitals in the Sudan".<sup>(10)</sup> The short campaign and frequent movement had not permitted the detailed observation of working conditions that he wished, but he comments very favourably on (a) the completeness of detail in dismantling and transporting mobile field hospitals, and (b) the standard of accommodation and medical treatment on hospital ships which were utilized not only for transport of invalids but also as base hospitals.

#### Defence Reorganization after 1870.

After the withdrawal of the British troops in 1870 the Colonial Governments had become increasingly aware of the weakness of their land defences and in 1876 appealed to the British Government for advice. Sir W. M. Jervois and Major Peter Scratchley were appointed to draw up a coordinated scheme of defence. Scratchley, who was subsequently knighted, is commemorated in the name of one of the fortresses in the Newcastle area. In 1884 he was appointed High Commissioner for the newly-created New Guinea Protectorate, but during his first visit to the island to organize an administration he contracted malaria of which he died in 1885.

The plan of defence was not completed until 1883. It provided in addition to naval defence for (a) a series of powerful armoured forts and (b) a well trained field force containing a permanent nucleus but consisting mainly of partially paid militia troops. As a result, all colonial forces were reorganized on a common plan and the number of personnel steadily increased. The force in New South Wales numbered 2119 in 1884, but, in 1902, when the various colonial forces were consolidated under the Commonwealth, they had increased to 9711, of whom 669 were permanent, 5549 partially paid militia and 3493 purely volunteer troops.

G. F. Dansey was still the Principal Medical Officer of the Volunteer Force, but it was to Williams that the Commandant, Colonel Richardson, applied in August, 1885, "to furnish a detailed scheme and probable cost of establishing and maintaining an Ambulance Corps sufficient for the whole 3500 men who comprise the New South Wales Force". Williams's report was completed before the end of the year, but it was not until 1888 that formal approval was given for the formation of a Medical Staff Corps comprising one Principal Medical Officer, four surgeons and 63 other ranks. In 1889 Williams was promoted to Brigade Surgeon ranking as lieutenant-colonel and was appointed Principal Medical Officer. Dansey commanded the Medical Staff Corps. In 1891 the Permanent Medical Staff Corps was formed for administrative and instructional duties. Its strength, at first 15, was later reduced to 11.

Note that no medical officer, not even the Principal Medical Officer, was given substantive army rank at this

stage. In the British Army it was only as late as 1877 that army medical officers were given powers of command over hospital staff and patients, and for years thereafter they were granted merely "relative rank". This caused much discontent and interfered seriously with recruiting of medical officers for the army. However, in 1891 a Royal Warrant was promulgated giving to medical officers substantive rank (with the prefix "surgeon"), with precedence and other privileges attaching to the rank. These composite titles were never popular, but they persisted until 1898 when the Army Medical Staff (which included all army medical officers) and the Medical Staff Corps (which comprised all other ranks personnel) were combined to form the Royal Army Medical Corps. Thenceforth, ranks and titles of army medical officers were identical with those of other branches and services. The development in New South Wales was along similar lines and substantive rank was granted to medical officers in 1892, but Williams had sufficient foresight to include both officers and other ranks in the one corps from the outset.

Williams was fortunate in his early subordinates. He interested in the army medical service many men who were subsequently leaders of the profession. In 1886 Joseph Foreman was appointed an assistant surgeon and posted to the New South Wales Lancers. E. J. Jenkins and A. Jarvie Hood were also amongst early enlistments. More important, however, were a group of medical officers who were not only practitioners of high standing but were also keen and enthusiastic soldiers. B. J. Newmarch, who was appointed an assistant surgeon in 1885, T. H. Fiaschi, Reuter Roth, and W. L'Estrange Eames, who enlisted in the early nineties, were destined not only to play an important part in the Boer War, but also all of them to hold senior administrative posts in the 1914-1918 war. Eames had previously enlisted in a unit formed in Dublin in 1885 to go to the Sudan under D. J. Cunningham the anatomist; this, however, was not required owing to cessation of hostilities. As the Volunteer Force grew there was a proportionate increase in the Medical Staff Corps. By 1896 it included Williams (Principal Medical Officer), Surgeon-Majors R. V. Kelly, who commanded the Medical Staff Corps, and E. J. Jenkins, who was Senior Medical Officer of the Fortress Area, ten surgeon-captains and 15 surgeon-lieutenants. G. F. Dansey was a surgeon-lieutenant-colonel on the Reserve of Officers and controlled the Garrison Hospital at Victoria Barracks. In that year also T. H. Fiaschi, who now commanded the Mounted Bearer Section attached to the New South Wales Lancers, was given six months' leave of absence to proceed to Abyssinia to assist the medical service of the Italian army.

It was of considerable assistance to Williams in the development of his medical plan that the other services and the various branches of the army appreciated his zeal and enthusiasm and actively cooperated with him. In 1893 Major-General Hutton, introducing him as a lecturer to the United Service Institution, commended him highly:

Of all branches of the Service in this Colony, I know of none which has arrived at more satisfactory standard of efficiency than the Medical Staff Corps. I have had every opportunity of seeing how this Branch of the Service is conducted in the Old Country, and I can safely say that I have never seen anything better than the standard of efficiency which has been reached here. Not long since, there was a Field Day of Mounted troops at Minto which included a section of the Bearer Company equipped with cacolets. I have never before seen the Medical Staff Corps represented with mounted troops in peace manœuvres.<sup>(11)</sup>

A striking development this, in a corps which ten years previously had had only two officers.

The question of a medical service for mounted troops was one to which Williams had devoted much thought and, in 1891, he had published his criticism of the existing scheme and recommendations for its improvement.<sup>(12)</sup> Whereas in Continental armies there was a provision for mounted bearer personnel, in the British army the bearer companies attached to cavalry were unmounted and equipped identically with those serving with unmounted

troops. In practice this was a most ineffective arrangement and, in the absence of any provision to meet the special conditions and exigencies that arose in the course of work with mounted services in the field, the whole medical system frequently broke down completely. To meet this contingency, Williams proposed the training of stretcher bearers, for whom there had hitherto been no provision in mounted units, and the formation of mounted bearer sections. He discussed also in detail their organization and equipment, much of which he had himself devised for ease of carriage. For transport, cacolets were recommended, also special light stretchers and an ambulance of his own design—light enough to keep up with the troops, yet sufficiently strong to withstand the strain due to rough and broken country. Finally, and this point he constantly stressed as an essential for all army medical units, it must be independent of other services as regards transport.

The introduction of magazine rifles and smokeless powder gave rise to discussion as to necessary resultant changes in the organization and training of bearer companies. It was considered that there would be a great increase in the number of casualties and that dressing stations would be kept further away from the front line, necessitating a longer carry. This would require increased numbers and improved physique of stretcher bearers. It led also to greater emphasis on the necessity for all personnel, medical and other, to be given a first field dressing and to be trained in first aid. This idea was not entirely original as in the first Zulu War of 1879, and possibly earlier, each soldier was expected to carry a piece of lint and bandage in his left-hand trouser pocket as an emergency dressing.<sup>(19)</sup>

In the light of more recent experiences it is interesting to read the view of an Austrian surgeon (1892) quoted by Williams:

It is evident that the system of collecting the wounded during an engagement must be completely changed. No Bearer detachment could live for two minutes within the firing line under the hail of projectiles which the new Magazine rifles would now pour upon them, and this without the curtain of smoke which has hitherto to some extent veiled the movements of contending armies. The danger for the Medical Staff and Bearer Companies will be far greater than that of the combatants, for whilst it is the duty of the latter to avail themselves of all the cover that can be obtained, the Bearers have to move slowly and carefully with their burdens and thus generally in the open. My own impression is, though it is a thought one scarcely likes to utter, that in the next war the Medical Corps must leave their wounded where they fall, preparing meantime for the moment when the contour of the ground or the ebbing tide of battle may allow them to act. Under such circumstances a wounded man would probably be safer whilst lying on the ground than if he were being carried to the rear on a stretcher.<sup>(20)</sup>

To the Principal Medical Officer this new complication was an argument for more intensive training of both stretcher bearers and medical units. Training he regarded as the most important factor in a medical service, and his standard was high.

The essentials for the successful conduct of a Medical Service in the field are that it should be under one command and thus self-controlled, possess adequate and trained reserve and ample reserve equipment.

To trust the treatment and transport of sick and wounded to Medical Units improvised in a hurry, at the most only partially trained and destitute of the special knowledge required, is nothing short of manslaughter. One of the most popular fallacies, even amongst those who should know better, is that a Medical Service can be improvised at the last moment.<sup>(21)</sup>

Officers, non-commissioned officers and men were given the widest experience possible on a peace basis. Schools of instruction for officers were held, both in Sydney and the country, and were largely attended. All ranks were encouraged to familiarize themselves with equipment and were practised in its use.

A mobilization scheme was worked out and tested on full day parades. All personnel were thoroughly trained

in every phase of field medical work. Improvements in equipment and particularly in ambulance transport were constantly kept in mind and tried out. The provision of a reserve from Saint John and other ambulance sources was planned; for a time an ambulance Cadet Corps functioned, trained by Reuter Roth. At the same time, the administrative side of the medical service had been carefully developed. The standing orders dealing with organization, training and equipment, as well as with the duties of medical officers, the regulations for schools of instruction and the standards of physical fitness, seem even today adequate and complete.

In 1898, the year that saw the birth of the Royal Army Medical Corps, the Medical Staff Corps in its three sections—permanent, partially paid, and volunteer—became the New South Wales Army Medical Corps, and the prefix "surgeon" to the ranks of the army medical officers was discontinued. A further innovation in the same year was the formation of the New South Wales Army Nursing Service Reserve, with an authorized strength of one lady superintendent, one superintendent and 24 nursing sisters. Miss E. J. Gould and Miss J. B. Johnstone were appointed to the senior positions.

Meantime the Corps had continued to increase until in 1899 its officers' strength was one colonel, one major, 15 captains, and 23 lieutenants—40 in all.

The two field units of the British medical service—the field hospital and the bearer company—still maintained an independent existence. Field hospitals had replaced regimental hospitals in 1873 and the formation of the first British bearer company in 1879, in the Sekukuni Campaign against the Kaffirs, was hailed as a great advance in army medical organization. Although they continued to function independently throughout the South African War, in the reorganization which followed its conclusion they were combined to form a single unit—the field ambulance—and this reform was implemented in the Australian Army Medical Corps in 1906.

#### The Boer War.

In 1899 the Boer War commenced. The Australian Colonies vied with one another in offers of troops to participate and all their offers were gratefully accepted. Each "contingent" was accompanied by its own regimental medical officers, but only in New South Wales had the organization of army medical services advanced sufficiently to permit the provision of formed army medical units.

Four medical contingents were sent from New South Wales. The First Contingent was mobilized on October 23, 1899, and embarked five days later under Williams's command. It included Majors Fiaschi, Roth and A. E. Perkins and comprised half a bearer company and a field hospital of 50 beds—in all six officers and 85 other ranks.

The Second Contingent embarked in January, 1900, under Lieutenant-Colonel R. Vandeleur Kelly with Major W. L. Eames second in command. It included a mounted bearer section. Alexander MacCormick and Robert Scot Skirving accompanied the contingent as major specialists, and the junior lieutenant was N. R. Howse. Also included were Miss E. J. Gould, Lady Superintendent, and 13 members of the New South Wales Army Nursing Reserve. These, with ten Victorian nurses who accompanied the Third Bushmen's Contingent, and three South Australian nurses who went to South Africa independently, were of inestimable value, particularly in the nursing of men with enteric fever. Most of the personnel of these contingents returned to Sydney early in 1901.

The Imperial Draft Contingent of the New South Wales Army Medical Corps left Sydney in March, 1901, under the command of Lieutenant-Colonel R. V. Kelly. After approximately one year's service, it disembarked in Sydney in June, 1902.

Finally, the Australian Army Medical Corps Contingent, which contained representatives of all States, left Sydney in February, 1902, arrived in South Africa in time to participate in some of the final mopping-up operations and embarked for home in July, 1902. The senior officers were Major T. A. Green and Major N. R. Howse, V.C. In all 30 medical officers and 338 other ranks were sent to

South Africa from New South Wales. In addition, one medical officer, T. A. Machattie of Bathurst, served as a combatant with the New South Wales Citizens Bushmen's Contingent. All the medical officers returned safely.

Other colonies were not so fortunate. Two Victorian medical officers were killed in action—Captain W. F. Hopkins (1900) and Lieutenant H. A. Palmer (1901)—whilst Captain J. T. Toll of South Australia died at sea of cerebral hemorrhage in 1900. Six other ranks from the New South Wales Medical Contingents died of enteric fever.

These medical units were very welcome to the Director-General of Medical Services of the Force. The strength of the Royal Army Medical Corps at the time barely sufficed for peace requirements and there was no organization for expansion in war. It had been anticipated that the war would be of more limited extent and shorter duration. Hence there was very inadequate provision for the large number of casualties which followed rapidly on its commencement. Speed of movement made maintenance of supplies difficult and the early medical arrangements were severely criticized and not without cause. Later, there was a general all-round improvement, although the constant flow of patients suffering from enteric fever taxed medical resources to the limit.

The colonial units were well trained and fully equipped to the last detail and, above all, they had their own transport. Each man, whatever his "trade grouping", was trained in all the duties of the unit and, in addition, they were collectively familiar with so many diverse trades that they were almost entirely independent whatever emergency arose.

The field hospital was set up at Orange River and subsequently at Bloemfontein, but rarely remained more than a few weeks in any one place. The bearer companies were often subdivided and operated in small detachments over a vast front. Frequently they were the only medical personnel able to keep up with the advancing troops, as, for instance, with General French on his march to Kimberley. Williams's insistence on their possessing their own transport was amply justified. The mounted bearer section was particularly valuable and it gradually became necessary to mount all the bearer sections to enable them to keep up with the troops. With the arrival of the Second Contingent Williams was made Principal Medical Officer of the Australian and New Zealand troops. Later he served in a similar capacity with Ian Hamilton's division and with General Hunter's force, the largest single body then operating in South Africa.

When Lord Roberts inspected the field hospital at Bloemfontein he complimented the staff, sent a special message of thanks for their service to the New South Wales Government and spoke with special commendation of the New South Wales ambulance wagons, which he intended to adopt as a pattern.

In February, 1900, the whole First Contingent, under Fiaschi, had joined in Lord Roberts's advance. There had been some chafing at earlier inactivity in Cape Town, but henceforth there was no complaint on that score. One of the features of the early stages of this war was that for a year or more it was absolutely incessant. There was no respite. They fought under varying conditions of fierce heat, biting cold, pouring rain, and when not in active battle they were constantly under fire by snipers. They covered great distances at relatively high speed so that food was often in short supply and replacement of clothing impossible, but the morale of the colonial troops remained at a high level throughout.

When French and Hutton were hard pressed at Wittepoort and every man was needed for the defence, Fiaschi asked for volunteers to remove their brassards and take up arms. To a man his unit volunteered, but fortunately they were not required. It was Fiaschi, too, who demanded and received the surrender of the first of Cronje's troops, who thus anticipated their leader, the most implacable and hated of the Boers.

At Vredepoort on July 24, 1900, Lieutenant Neville Howse made history. Noting that a trumpeter had been wounded, he galloped to his assistance under a heavy cross fire.

His horse was killed under him, but he contrived to reach his patient, who had been shot through the bladder, and carried him to shelter and safety. For this he was awarded the Victoria Cross and remains the only Australian medical officer who has ever achieved that distinction. Thus early in his army career did fame come to the distinguished medical officer who was subsequently to become the forceful Director of Medical Services of the first Australian Imperial Force and later still, before his death in 1930, Minister for Defence in the Australian Commonwealth.

The New South Wales ambulances continued to attract attention. They were lighter and better sprung than the imperial pattern and could follow the guns wherever they were taken. General French rode in one with Eames to try it out. The search for wounded frequently took the bearers into the Boer lines. Usually they were not molested, but both Eames and Perkins were taken prisoner, although they managed to talk their way out.

The prestige of the New South Wales Medical Contingent steadily improved. The Surgeon-General asked Williams to provide a medical service for a large force of mounted troops, adding that he could rely on no one else to provide so effectively for such a contingency. The Field-Marshal repeatedly commended their work. The results of their war surgery were very good considering the conditions under which much of it was carried out—in improvised, highly unsuitable buildings. In addition to MacCormick, there were several competent surgeons available, and wound infection was not on the veldt a problem on the same scale as it was later in France and Belgium. Enteric fever was the greatest problem. There were over the whole period approximately 60,000 cases amongst British troops with 8227 deaths.

When the First and Second Contingents embarked for home the worst of the hard fighting was over. The Boers were already beaten, their cause irretrievably lost, although incessant guerilla warfare was waged on an extensive scale until May, 1902.

Howse gained his Victoria Cross. Williams, Kelly and Eames were created Companions of the Most Honourable Order of the Bath. Fiaschi, Roth, A. E. Perkins, T. A. Green and A. H. Horsfall were created Companions of the Distinguished Service Order—a distribution of honours without precedent at that date. The New South Wales Army Medical Corps thus terminated its career with honour and distinction.

#### The Beginning of the Australian Army Medical Corps.

Immediately on his return in 1901, Williams began the organization of a federal army medical service—the Australian Army Medical Corps—his plans for which he had foreshadowed eight years before, and into which the New South Wales Corps merged. In his address to the United Service Institution in 1893 he had concluded thus:

Regimental traditions are the sheet anchor of that national pride which encourages a soldier to look to his own regiment or service as second to none under arms—and when we consider the slow growth of the medical services, not only in the Colonies, but all over the world, sprung from seed sown on none too favourable ground, badly cared for in their early growth, occasionally pruned to such an extent as to cut them down altogether, may I suggest a motto which conveys in one word the life history and growth of the Medical Services and could most fittingly be adopted. I give you "Paulatim"—little by little.<sup>(9)</sup>

Curiosity has often been expressed as to the origin of this motto, which was adopted by both the New South Wales Army Medical Corps and the Australian Army Medical Corps.

When Williams found the service in 1883 it was at a low ebb, but the development of the Corps in the intervening years, if gradual and slow, was well planned and sure. When the need for its services arose, enthusiasm and morale were high and it was well disciplined and trained to meet it. The splendid achievement of the New South Wales Army Medical Corps in South Africa should be a source of pride to those who have followed them in the Australian Army Medical Corps and is a



lasting tribute to the enthusiasm and extraordinary organizing ability of the man who was mainly responsible for it: William Duncan Campbell Williams.

#### Acknowledgement.

I am greatly indebted to Miss M. Rolleston, librarian of the New South Wales Branch of the British Medical Association, for invaluable help in locating references.

For the early history I have had recourse to the very complete records available in the Mitchell Library and am grateful to the library staff for their unvarying assistance and courtesy. I have drawn freely on the reminiscences of Major-General W. L'Estrange Eames who is happily still with us.

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#### SOME FACTORS PREDISPOSING TO JUVENILE RHEUMATIC FEVER IN SYDNEY.

By JOAN STOREY,

Sister Sanders Scholar, University of Sydney, 1946-1947.

This study of juvenile rheumatic fever was carried out at the Royal Alexandra Hospital for Children in 1946-1947. The aim was directed towards the preventive aspect of the disease, and although investigation into predisposing factors may seem a very indirect approach, one is forced to adopt roundabout methods in dealing with a disease which is of uncertain aetiology and of unknown cure, and for which, apart from the use of the sulphonamides, there is no specific prophylaxis.

Again, if the subject has been dealt with *ad nauseam* in the past, the reiteration can perhaps be forgiven if the prevalence of this condition is realized, for one is so apt to overlook a disease which tends to become chronic without any outward and visible manifestations, and indeed it is only by constant reminder of its ever-present threat, especially to the younger members of the community, that we may eventually achieve some progress towards its elimination.

As rheumatic fever is not notifiable, no certain means are available of judging its true incidence, and to do so would require not only investigation into all hospital cases, but a great deal of information from medical practitioners concerning the patients who are treated in their own homes.

Kempson Maddox<sup>(1)</sup> in 1936 estimated that the incidence of cardiac rheumatism in New South Wales was from 0.3% to 0.6% of the whole population, and in South Australia<sup>(2)</sup> it was found that 0.67% of school children examined had suffered from acute rheumatism or chorea.

The admission rates in some of the major Sydney hospitals are shown in Table I, as some indication of the prevalence of rheumatic fever, and for comparison the

figures obtained by Kempson Maddox<sup>(1)</sup> for the previous decade are quoted.

It should be noted that during this ten-year period at the Royal Alexandra Hospital for Children, 34,187 operations were performed for the removal of tonsils and adenoids, and a large percentage of the children were admitted to hospital for this purpose alone. If these are subtracted from the total number of admissions, the percentage incidence of rheumatic fever rises to 1.79%.

TABLE I.

Hospital.	Total Admissions.	Rheumatic Fever Admissions.	Incidence of Rheumatic Fever. (Percentage.)	Incidence of Acute Rheumatism. (Percentage— from Maddox, <sup>(1)</sup> 1926-1935.)
Royal Alexandra Hospital for Children, July, 1936, to June, 1947 ..	105,234	1,275	1.212	0.735
Royal Prince Alfred Hospital, 1937 to 1946 ..	118,743	352	0.297	0.35
Sydney Hospital, 1937 to 1946 ..	70,500	213	0.302	0.3
Saint Vincent's Hospital, 1937 to 1946 ..	48,826	193	0.395	0.27
Prince Henry Hospital, 1938 to 1945 ..	70,167	143	0.204	—

<sup>1</sup> Includes 70 cases of rheumatic carditis classified separately from rheumatic fever after July, 1942.

It will be seen from Table I that the admission rate for rheumatic fever at the Royal Alexandra Hospital for Children rose from 0.735% in 1926-1935 to 1.212% in 1936-1947. It would be rather hasty to presume an increase in the disease from these figures, and the explanation may be that a greater number of rheumatic fever patients are being admitted to hospital. Figure I shows graphically

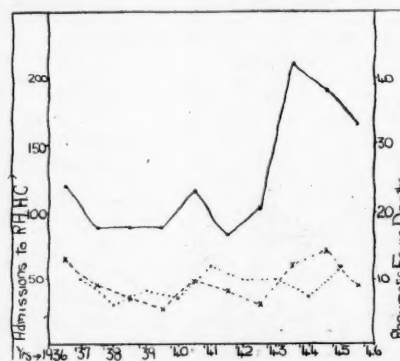


FIGURE I.

To show the fluctuations from year to year in the total admissions for rheumatic fever and chorea to the Royal Alexandra Hospital for Children during the years 1936-1946. For comparison the deaths from rheumatic fever amongst children in the age group five to fifteen years in the metropolitan area over the same period are shown. Continuous line, rheumatic fever admissions; interrupted line, chorea admissions; dotted line, rheumatic fever deaths.

that in 1942-1943 the admissions for rheumatic fever were nearly double those of the previous year, and that there has been a slight fall since. The line for chorea follows much the same curve. The number of deaths in Sydney from this disease in the age group five to fourteen years

is also shown on the graph, and this does not correspond with the fluctuation in admissions to hospital, so that even if the disease was more prevalent the mortality rate was not increased. However, it can be seen from Figure II that the rise in admissions during this period may be correlated with the increase in scarlet fever notifications, and it is possible that there is a fluctuation from year to year, dependent somewhat upon the prevalence of streptococcal infections.

Glover,<sup>(3)</sup> writing in England, has shown that since 1920 there has been a fall in the death rate of rheumatic fever and in the percentage of school children suffering from rheumatic heart disease. He suggests that the factors influencing the decline may have been the various rheumatic fever control schemes, the decrease in poverty with the increased employment during the war years, but chiefly some difference in the relationship of man to hemolytic streptococci. He demonstrates a close correlation with the fall in the death rate of scarlet fever.

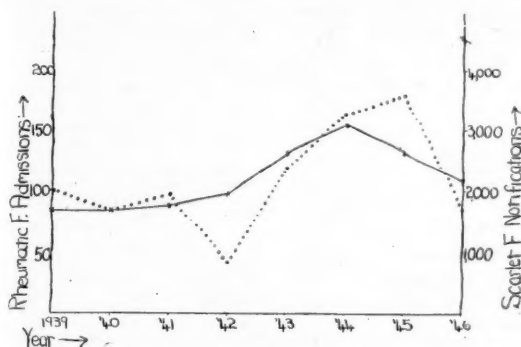


FIGURE II.

To show the admissions for rheumatic fever from 1939 to 1946 to the major metropolitan hospitals and, for comparison, the scarlet fever notifications over the same period. Continuous line, rheumatic fever admissions; interrupted line, scarlet fever notifications.

The figures shown in Table I are similar to the percentage admission rate for adult hospitals in Adelaide,<sup>(2)</sup> but are rather lower (1.2% as compared with 1.8%) for the Adelaide Children's Hospital. This latter figure, however, includes chorea, and the figure for the Children's Hospital, Melbourne<sup>(4)</sup> (2.5%), is even higher, but again includes both conditions.

Owing to the long period in hospital necessary for the treatment of rheumatic fever, the percentage of admissions does not indicate fully the number of hospital beds required by patients suffering from this disease. During the year of study, note was made at intervals of two months of the number of in-patients suffering from chorea and rheumatic fever. This gave an average of 4.3 for the former and 21.7 for the latter, 26 in all, and of a total of 439 beds 5.9% of the patients in hospital were suffering from a rheumatic condition.

Table II shows the major causes of death in the age group five to fourteen years. If one does not consider those due to accidents and violence, it will be seen that rheumatic fever (including chronic rheumatic heart disease) has been the chief cause of death among children of this age group over the past five years. Similarly, it accounts for more deaths in the age group five to twenty years in America than does any other disease.<sup>(5)</sup> Diphtheria was a considerably greater factor in previous years and it may again take chief place; but whereas we have a weapon against this and the other acute infections, the death rate from rheumatic fever persists unabated year by year.

#### METHOD OF INVESTIGATION.

During the year from June, 1946, to June, 1947, rheumatic patients at the Royal Alexandra Hospital for Children were studied, together with those attending

follow-up clinics, and their mothers were questioned with regard to certain aspects of the disease.

Hospital records for rheumatic disease were investigated at some of the major metropolitan hospitals over a ten-year period, where that was possible.

#### THE ROLE OF THE HÆMOLYTIC STREPTOCOCCUS GROUP A.

The first aim was to determine the part, if any, played by the hemolytic streptococcus Lancefield group A and by upper respiratory tract infection as predisposing factors to an attack of rheumatic fever.

Although in the past many organisms have been singled out as responsible for this condition,<sup>(6)</sup> the modern consensus of opinion incriminates the hemolytic streptococcus group A as a major factor in the etiology of the disease.

Schlesinger<sup>(7)</sup> and Coburn<sup>(8)</sup> described rheumatic recurrences in convalescent patients following pharyngitis due to hemolytic streptococci, and both state that the infection,

TABLE II.  
Deaths in the Metropolitan Area. Age Group Five to Fourteen Years.

Cause.	Nine Years, 1937 to 1945.	Five Years, 1941 to 1945.
All deaths .. .. .	1,739	841
Diphtheria .. .. .	169	50
Appendicitis .. .. .	165	54
Rheumatic fever <sup>1</sup> .. .. .	101	63
Pneumonia <sup>1</sup> .. .. .	99	37
Epidemic cerebro-spinal meningitis .. .. .	34	30
Osteomyelitis .. .. .	34	10
Poliomyelitis .. .. .	16	11
Accidents and violence .. .. .	448	241

<sup>1</sup> Rheumatic fever includes deaths from rheumatic heart disease, acute or chronic. Pneumonia includes lobar pneumonia, bronchopneumonia and unspecified pneumonia.

in many instances, was so mild that it could easily have been missed if the patients had not been closely watched or if the change in their throat flora had not been noted by serial throat swabbings. Other writers<sup>(9)(10)(11)</sup> have added their descriptions of similar outbreaks occurring in groups following a wave of streptococcal tonsillitis.

Further evidence lies in the study of immunity reactions. Todd<sup>(12)</sup> demonstrated antistreptolysin in the serum after infection with hemolytic streptococci, and a rise in anti-streptolysin titre has been found in a large proportion of cases of rheumatic fever;<sup>(13)(14)(15)(16)</sup> although it is not claimed that this test is entirely specific,<sup>(17)</sup> it would seem to indicate that these rheumatic fever patients have undergone a recent invasion by the hemolytic streptococcus. Moreover, Coburn and Pauli<sup>(18)</sup> noted that the rise of anti-streptolysin titre was independent of a history of preceding upper respiratory tract infection, and that this rise, as well as being marked, was prolonged. They suggest that the delayed rise (it does not reach its peak until after the development of the rheumatic process) may be due to delay in the immune response of the rheumatic patient or to delay in the final elimination of hemolytic streptococci from the body. With regard to the latter hypothesis, it is of interest that although cultural examinations of the blood and exudates of patients with acute rheumatic fever have yielded negative or conflicting results,<sup>(19)(20)</sup> at least two workers<sup>(21)(22)</sup> have demonstrated the presence of hemolytic streptococci at the post-mortem examinations of a high percentage of patients who have died from rheumatic fever.

Results of skin tests performed upon rheumatic patients give still more support to the accumulated evidence which incriminates the hemolytic streptococcus as an etiological factor. Coburn,<sup>(8)</sup> using the nucleoprotein derivative of the hemolytic streptococcus, found a high percentage of reactions both in rheumatic patients and in others recently affected by a streptococcal infection. Green<sup>(23)</sup> and Collis,<sup>(24)</sup> using an endotoxin preparation, found many more reactions in the rheumatic group than in the control group.

Swift<sup>(25)</sup> argues that the ability to control recurrences in rheumatic fever by the use of the sulphonamides<sup>(26)(27)(28)</sup>

is further evidence of the important role played by hæmolytic streptococci.

In view of the fact that infection with this organism will not explain the full sequence of events, other theories have been evolved. One theory postulates that the preliminary streptococcal infection prepares the way for virus invasion.<sup>(17)</sup> Schlesinger, Signy and Amies<sup>(24)</sup> have demonstrated elementary bodies in pericardial fluid from acute pericarditis, and MacNeal<sup>(25)</sup> demonstrated changes in the chorio-allantoic membrane of a chick embryo produced by the plasma of a girl suffering from acute rheumatic fever and pericarditis.

Another theory which has attracted much attention in recent years is that rheumatic fever is an allergic phenomenon or an imperfect immune response.<sup>(26) (27) (28)</sup> More specifically, Coburn and Pauli<sup>(29)</sup> report a diminution in serum complement in their Phase II of the rheumatic response—that is, the silent period between the streptococcal infection (Phase I) and the onset of rheumatic fever (Phase III). They also demonstrated a precipitin reaction between samples of serum collected just before and shortly after the onset of rheumatic fever, occurring both in samples of serum collected from the same patient and in heterologous serum.

The experimental work of Rich and Gregory,<sup>(30)</sup> who by inducing artificial serum sickness in rabbits produced changes in the heart similar to those in rheumatic fever, suggests that the cardiac lesions in this disease may be the result of a hypersensitive reaction of the anaphylactic type, and these writers point out the features which rheumatic fever has in common with serum sickness. In another paper<sup>(31)</sup> the similarity between rheumatic pneumonia and that caused by sulphonamide hypersensitivity is discussed.

Hyaluronic acid<sup>(32)</sup> is mentioned<sup>(33)</sup> as of possible significance in regard to rheumatic fever. It is found in the capsules of some streptococci and is also a chief constituent of connective tissue. Hyaluronidase, the enzyme acting on hyaluronic acid, was found to have a spreading effect on the intradermal injection of dyes, and this spreading effect was greatest in rheumatic people and was inhibited by the oral administration of sodium salicylate.<sup>(32)</sup>

It is possible that in some complex manner rheumatic fever may be bound up with cell enzymes and metabolism, and Coburn,<sup>(34)</sup> in summarizing just how much there is still to learn concerning rheumatic fever, suggests that the rheumatic process may in fact be a "biochemical reaction of man".

#### Throat Swabbings.

The results of examinations of throat swabbings taken once the rheumatic fever has developed cannot hope to prove the nature of a preceding pharyngitis, for the infection which did the damage is past. Coburn<sup>(35)</sup> states that "the streptococcus hæmolyticus can be present in pure culture at the time of a sore throat, and completely disappear at the onset of the rheumatic disease", and he emphasizes the transitory nature of Phase I. Homer Swift<sup>(36)</sup> maintains that the organisms have probably disappeared from the throats of 25% to 35% of patients by the time of onset of the rheumatic fever, and moreover, it has been found<sup>(37)</sup> that the organism, if present, may not be of the same serological type as that which caused the original pharyngitis.

However, if a preceding hæmolytic streptococcal tonsillitis was an important precursor, one would expect the streptococci still to be present at the time of onset of the rheumatic fever in a percentage of the throats, and one would also expect rheumatic patients to have a higher carrier rate than a control series. This was found to be the case by Green<sup>(38)</sup> in England, who discovered hæmolytic streptococci group A in throat swabbings from 50.5% of patients admitted to hospital suffering from rheumatic fever, and in only 12.5% of control patients. Collis<sup>(39)</sup> also found the hæmolytic streptococcus in about half the children admitted to hospital suffering from rheumatic fever, and in Adelaide<sup>(40)</sup> this organism was found in 10 out of 40 patients.

During the year of study, throat swabbings were taken from each child suffering from rheumatic fever or chorea (97 in all, comprising 76 first attacks and 21 recurrences) admitted to the Royal Alexandra Hospital for Children. The swabbings were taken as soon as possible after admission to hospital, and as a control a swabbing was taken from a child admitted to hospital suffering from some other disease (usually medical). In the majority of instances the most recent admission to the ward was selected as the control, but an attempt was made to find a child of a comparable age, and patients who had received chemotherapy were rejected.

The throat swab was taken in the usual manner, the swabstick being passed down each tonsil or tonsillar fossa and the posterior pharyngeal wall. It was then plated out on blood agar, half the plate being used for the patient and half for the control. Approximately half the subjects, both rheumatic patients and controls, had only one swabbing taken; the others had two swabbings.

The hæmolytic streptococci were picked off, subcultured and typed both on maltose plates<sup>(41)</sup> and by Lancefield's<sup>(42)</sup> precipitin method. The results are shown in Table III.

TABLE III.<sup>1</sup>

Condition Investigated.	Rheumatic Fever Patients.		Controls.	
	Hæmolytic Streptococci Group A Present.	Hæmolytic Streptococci Group A Absent.	Hæmolytic Streptococci Group A Present.	Hæmolytic Streptococci Group A Absent.
Acute rheumatic fever	18	37	2	53
Subacute rheumatic fever	3	26	3	26
Total rheumatic fever	21	63	5	79
Chorea	2	11	0	13
Total	23	74	5	92
Grand total	97		97	

<sup>1</sup> \* rheumatic fever group = 11.64 for one degree of freedom. Probability < 0.001.

When the rheumatic fever group of patients was compared with the control group, it was found that 23.7% of the former presented hæmolytic streptococci group A in the throat swabbing and only 5.2% of the latter. If the results among the patients in whom the illness had an insidious onset (subacute group) are neglected, it will be seen that the percentage of positive findings in the acute rheumatic fever group rises to 32.7, compared with 3.6 in the control group. Although the total number of throat swabbings containing hæmolytic streptococci is lower than overseas figures, there is a significant difference between the two groups.

A carrier rate of 5.2% in the control group is lower than one might have expected in view of the findings in Victoria in 1940,<sup>(38)</sup> where a carrier rate of 13.3% was estimated among school children. This difference is even more remarkable when one considers that, in the present series, the controls were not healthy children; at least 15 had suffered from recent upper respiratory tract infection and 20 were subject to recurrent colds or bronchitis. However, a carrier rate may vary greatly from place to place. Van Ravensway<sup>(43)</sup> in America, in a very large series, reported an average rate of 14.6% with a variation from 30.3% to 0.3%, and it is possible that for the period considered in this study there was a low seasonal incidence of hæmolytic streptococcal disease. Figure II shows a fall in the notifications for scarlet fever in the latter part of 1946.

During the year the majority of the swabs in both groups which yielded positive results showed only a few hæmolytic streptococcal colonies, but four yielded a much larger



growth. The two richest cultures were obtained from patients admitted to hospital with acute rheumatic fever, who had had a sore throat within one week of admission to hospital and were still showing signs of acute tonsillar inflammation. The third was from a patient admitted to hospital with acute rheumatic fever, who gave a history of recurrent sore throats and of a cold two weeks previously. The fourth was a control swabbing from a patient who suffered from chronic tonsillitis.

Table IV deals only with the rheumatic group of patients, and shows the relationship between the recent history regarding a respiratory tract infection, the clinical evidence of throat infection and the occurrence of hæmolytic streptococci group A in the throat swab. It will be seen that a greater percentage of those with a preceding respiratory infection, whether a sore throat or otherwise,

TABLE IV.

Condition.	Total Number of Patients.	Clinical Signs of Throat Infection.		Hæmolytic Streptococci in Throat Swabbings.	
		Present.	Absent.	Present.	Absent.
Recent sore throat	26	16	10	9	17
Recent respiratory tract infection ..	11	5	6	5	6
No history of recent respiratory tract infection ..	60	17	43	9	51
Total ..	97	38	59	23	74

yielded positive throat swab findings; conversely, 14 out of the 23 positive findings came from the throats of patients who had had a recent infection. Out of a total of 97 rheumatic patients, 26 gave a history of sore throat and a further 22 presented clinical evidence of throat infection, making a total of 48. Hughes,<sup>(40)</sup> in a series of 118 rheumatic children at the Royal Alexandra Hospital prior to 1934, found that "in 54% there was an associated tonsillitis or history of previous attacks of tonsillitis".

Table V shows the relation of various findings on rheumatic fever and control patients, and in the former group compares first attacks with recurrences. It demonstrates that there is an increased incidence of hæmolytic streptococci among the rheumatic fever patients but that there is no correlation between clinical signs of throat infection and rheumatic fever, and it confirms the contention that the presence or absence of tonsils is not a factor in this disease.

#### Throat Swabbings from Rheumatic Patients without Active Infection.

During the year the mothers of the rheumatic children were asked to bring them to the follow-up department if the children should develop a sore throat or other respiratory tract infection. There were 27 such attendances and throat swabbings were taken from the patients while

symptoms were still present or within one week of their onset, except in two instances, in which they were taken two weeks later.

Fifteen complained of sore throats, in three instances accompanied by mild aches and in five by colds. Twelve suffered from colds or bronchitis without sore throats. In all, only two throats appeared acutely inflamed, but 14 showed some degree of infection. Only one swabbing yielded a culture of hæmolytic streptococci group A, and this was a heavy growth. The patient had been receiving prophylactic sulphonamide therapy, but this had been stopped three weeks before the development of the sore throat because of a low leucocyte count. He was given bed rest for the period of his infection and was returned to the sulphonamide prophylaxis one month later. No rheumatic relapse occurred within a period of three months.

One patient, whose throat swabbing had yielded negative findings, had a rheumatic recurrence with swollen joints and raised blood sedimentation rate a few days after the development of the cold for which the swabbing was taken. However, this one swab examination may easily have missed a mild streptococcal infection at an earlier date.

Seven others were treated with salicylates and rest because of mild joint pains at the time of their infection, but were not considered to be suffering from true relapses.

#### History of Preceding Infection.

With regard to the site of entry of the streptococcal infection, the naso-pharynx has received the greatest attention. Coburn<sup>(41)</sup> stresses the fact that acute rheumatic fever usually follows some sort of upper respiratory tract infection or bronchitis.

In investigations made upon adults, the percentage giving a preceding history of upper respiratory tract infection has been found to vary from 50<sup>(42)</sup> to 90,<sup>(43)(44)</sup> and in Green's<sup>(45)</sup> series 78% had a history of recent sore throat. In dealing with children, it was found in Adelaide<sup>(46)</sup> that in 34.2% the condition followed upper respiratory tract infection, generally acute tonsillitis.

The material for this study was divided into three groups, A, B and C. Group A consisted of 177 cases of acute rheumatic fever, 48 of them recurrences, and 46 cases of chorea, including 13 recurrences, from the Royal Alexandra Hospital for Children. The mothers of these patients were interviewed personally and specifically interrogated with regard to the child's health preceding the onset of the rheumatic fever or chorea. About half of them were questioned while the patient was still in hospital, soon after the onset, and the others were interviewed in the follow-up department at a varying time after the illness, so that in these instances the accuracy of the mother's memory is a factor which has to be considered. Groups B and C are taken from histories of patients admitted over the past ten years to the Royal Alexandra Hospital for Children, to the Royal Prince Alfred Hospital, Sydney, and to Saint Vincent's Hospital, Sydney, and over the past eight years to the Prince Henry Hospital and the Rachel Forster Hospital. Group B comprises 833 patients aged under seventeen years, 210 having recurrences. Group C comprises 387 patients aged over seventeen years, including 125 with recurrences. In all groups cases were omitted in which the diagnosis was doubtful or the onset was insidious.

TABLE V.

Condition.	Total Number of Subjects.	Tonsils.		Clinical Signs of Throat Infection.		Hæmolytic Streptococci in Throat Swabbings.	
		Present.	Absent.	Present.	Absent.	Present.	Absent.
Rheumatic fever and chorea, first attack ..	76	53	23	33	43	21	55
Rheumatic fever and chorea, recurrences	21	11	10	5	16	2	19
All rheumatic fever .. .. .	97	64	33	38	59	23	74
Controls .. .. .	97	65	32	30	67	5	92

TABLE VI.

Group.	Sore Throat.	Other Respiratory Tract Infection.	Other Superficial Infections.	Others.	No Preceding Illness.	Not Stated.	Total.
A { Acute rheumatic fever .. .. .	55	27	10	20	65	—	177
B { Chorea .. .. .	12 <sup>1</sup>	6	2	2	24	—	46
C .. .. .	166	80	15	49	117	406	833
	79	13	6	12	59	118	287

<sup>1</sup> Two of these patients had had mild joint pains before the development of chorea.

It will be seen from Table VI that the majority of the patients do not give a preceding history of sore throat, but that in Groups B and C there is also a large number of cases in which no statement was made regarding the history of a preceding infection. Although many of these patients may have had no such illness, there were no doubt a considerable number who did not mention an upper respiratory tract infection, particularly a mild one, suffered some weeks previously.

In Table VII the preceding illnesses are shown as percentages. It will be seen that the percentage of preceding sore throats in the adult series is almost as high as that in the juvenile series, in which the patients were questioned specifically, and if we neglect the 118 histories in which no statement was made regarding preceding infection, we find that the percentage of those giving a history of sore throat is 40.8 and of all giving a history of respiratory infection 54.5.

TABLE VII.

Group.	Sore Throat. (Percentage.)	All Respiratory Tract Infections. (Percentage.)	No History or Not Stated. (Percentage.)	Others. (Percentage.)	Total.
A. Rheumatic fever ..	31.1	46.3	36.7	16.9	177
B .. ..	19.9	29.5	62.6	7.9	833
C .. ..	27.5	32.0	61.7	6.3	287
Combined rheumatic fever ..	23.1	32.3	58.8	8.8	1,297
A. Chorea ..	26.1	39.1	50.0	4.3	46

Table VIII shows the time lapse between a sore throat and the development of rheumatic fever. In the majority of cases this is seven days to eight weeks; but in 54 the period between the two was less than one week. Those listed as "frequent" are patients who stated that sore throats occurred often but who could not give the date of one particular attack in reference to the onset of rheumatic fever. The fifth column in Table VIII shows the number of patients who suffered a sore throat concurrently with or up to three days before the onset of rheumatic symptoms. In these instances the sore throat was regarded as a further symptom and not as a preceding illness. The last column shows the number of cases of rheumatic fever following scarlet fever, 1.6% of all cases. Post-scarlatinal rheumatic fever does not appear to be common in Sydney.

Of 200 consecutive case histories of scarlet fever in 1944 at the Prince Henry Hospital, in none was it followed by an attack of rheumatic fever during the period while the patients were still in hospital. In the majority of the cases the scarlet fever was mild and the patients received treatment with the sulphonamide drugs. Four experienced mild joint pains, but with no other signs of rheumatic fever except in one instance, in which there was a transient mitral systolic murmur. Sixteen others were recorded as having mitral systolic murmurs, in eight instances they were transient, and in the remainder they were heard over a prolonged period. In none of these was there any rise in temperature or in blood sedimentation rate. One patient, aged three years, developed acute myocarditis with collapse. Neubauer<sup>(2)</sup> in a series of 602 cases of relatively mild scarlet fever reported cardiac complications in 36 cases.

In Table VI those conditions listed as "other respiratory tract infections" were chiefly colds, bronchitis, influenza or ear disease. Also shown in Table VI are 33 attacks of rheumatic fever following superficial infections. The majority of these were impetigo or "sores", boils or abscesses, and one case of erysipelas was included. Of these the last is the only one which we may safely regard as being caused by the hæmolytic streptococcus. Topley and Wilson<sup>(4)</sup> state that "many of the localized pustular lesions of the skin are caused by staphylococci". However, the hæmolytic streptococcus group A was cultivated from a sore still remaining on the leg of one rheumatic fever patient when he was admitted to hospital. These sores appear to be fairly common among school children in Sydney and are apt to pass unnoticed. They cause no constitutional disturbances, but they may be a more important precursor of rheumatic fever than would appear from this investigation.

Table IX deals with the factors listed as "others" in Table VI. They are other events which occurred in the two months before the onset of the rheumatic attack, in the absence of any respiratory tract infection. Measles (occurring in approximately 1.5% of all cases) is the largest factor; but here the possibility that the rash may have been confused with scarlet fever has to be considered, and also a possible secondary infection with hæmolytic streptococci. Of the 13 attacks following tonsillectomy, eight are recurrences, and although the total number is small, the fact that recurrences do take place is sufficient to suggest the advisability of using chemotherapy when tonsillectomy is performed on a patient who has had rheumatic fever. The cases of rheumatic fever following an injection of serum, though small in number, are of

TABLE VIII.  
Sore Throat.

Group.	Lapse of Three Days to One Week.	Lapse of One Week to Two Months.	Sore Throat Frequent.	Sore Throat Concurrently with or up to Three Days before Onset.	Total.	Sore Throat at Onset.	Rheumatic Fever Following Scarlet Fever.
A .. ..	4 (2) <sup>1</sup>	35 (5)	15 (5)	1	55 (12)	5 (2)	4
B .. ..	37 (8)	94 (13)	24 (6)	11 (2)	166 (39)	76 (15)	14
C .. ..	13 (6)	55 (19)	11 (4)	—	79 (28)	33 (13)	3
Total..	54	184	50	12	300	114	21

<sup>1</sup> The figures in parentheses indicate the number of recurrences in each group.

TABLE IX.  
Factors Preceding Rheumatic Fever.

Group.	Measles.	Rubella.	Chicken-pox.	Whooping Cough.	Gastro-Intestinal.	Injury.	Post-Tonsillectomy.	Injection of Serum.	Tooth Extraction.	Appendicectomy.	Exposure to Cold and Damp.	Total.
A. Rheumatic fever and chorea ..	7	1	—	—	4	2	4	2	—	—	2	22
B .. ..	12	4	3	1	4	11	6	2	3	2	1	49
C .. ..	3	1	—	—	—	—	3	—	2	—	3	12
Total ..	22	6	3	1	8	13	13	4	5	2	6	83

interest in view of the allergic theory in the aetiology of rheumatic fever, and these cases will be discussed in detail in another paper.

## THE EFFECT OF ENVIRONMENT.

The effect of environment was studied in two parts.

## Part I.

From the histories of patients under the age of seventeen years admitted to the Royal Alexandra Hospital, the Royal Prince Alfred Hospital, Sydney Hospital and Saint Vincent's Hospital over the past ten years and to the Prince Henry Hospital over the past eight years, the addresses were obtained of those suffering from rheumatic fever and chorea, a total of 1180 in the metropolitan area.

The first 1000 of these were plotted on a map of Sydney (Figure V), which shows that the greatest congregation of patients is in the Chippendale, Paddington, Surry Hills, Newtown and Camperdown areas, with a spread less dense into Forest Lodge, Glebe, Annandale, Leichhardt and Marrickville, and then the scatter is fairly even over the south-eastern and western suburbs.

It is at once obvious that the greatest congregation is around the hospitals to which the patients were admitted, and it may be argued that in the suburbs more remote from these public hospitals there would be many patients who were treated at home or in their local hospitals.

There appears to be no concentration of cases around waterways, except perhaps along the canals in Leichhardt. This correlation was found in a similar study carried out in Adelaide.<sup>(2)</sup>

Table X gives the distribution of cases in the various municipalities (the Northern Suburbs are not considered, as case histories were not taken from the Royal North Shore Hospital). The figures follow closely those given by Maddox<sup>(1)</sup> for the ten-year period preceding 1936. Table X also shows the number of cases of rheumatic disease per 1000 of the population aged under twenty-one years in each area. This was included to give some idea of whether the higher occurrence rate in the crowded areas was due simply to the greater number of people, which increased the chance of occurrence. The incidence is highest in the densely populated areas, although exceptions are found in Alexandria, Mascot and Botany, where the incidence is high but the density of population relatively low. However, in these areas there is much unoccupied land and the population is more crowded than the figures indicate. On the other hand, Ashfield, Petersham and Waverley have

not such a high incidence as might be expected from the density of the population.

## Part II.

Mothers of 200 rheumatic fever patients and 38 chorea patients who had been admitted to the Royal Alexandra Hospital for Children were questioned regarding factors of dampness and overcrowding in their homes; 150 mothers

TABLE X.

Municipality.	Total Number of Subjects with Rheumatic Fever and Chorea Aged under 17 Years.	Population Aged Under 21 Years (1933).	Number of Cases per 1000 of Population under 21 Years.	Density of Population per Acre (1942).
Erskineville ..	27	2922	9.31	33.66
Darlington ..	10	1123	9.09	51.30
Paddington ..	66	7951	8.3	56.79
Redfern ..	49	6895	7.1	43.22
Newtown ..	67	9666	6.9	51.31
City ..	140	21,696	6.45	27.59
Glebe ..	42	6952	6.04	37.01
Alexandria ..	21	3814	5.26	8.05
Waterloo ..	23	4763	4.81	13.81
St. Peters ..	25	5239	4.77	13.99
Leichhardt ..	54	11,493	4.69	26.08
Annandale ..	20	4496	4.44	33.64
Marrickville ..	67	15,895	4.21	24.51
Randwick ..	93	25,565	3.63	10.10
Balmain ..	31	11,271	2.74	28.39
Mascot ..	25	6092	4.1	7.09
Woolahra ..	25	9509	2.63	20.87
Botany ..	11	3624	3.06	4.12
Petersham ..	22	3470	2.56	32.45
Waverley ..	43	18,240	2.33	28.88
Bankstown ..	26	11,517	2.26	1.52
Canterbury ..	58	32,774	1.77	10.22
Ashfield ..	12	12,775	0.94	20.18

of non-rheumatic patients either in the hospital or attending the out-patient department supplied similar information.

Table XI shows the results obtained with regard to dampness in the environment. This has frequently been blamed as a contributory factor in the development of rheumatic fever. Lichtwitz<sup>(3)</sup> believes that 30% to 60% of rheumatic fever patients come from damp homes. In this series it was found that 39% of the rheumatic fever

TABLE XI.

Subjects.	Dampness.				Dry.	Total.
	Inside House Only.	Both Inside and Outside.	Outside House Only.	Total Dampness.		
Rheumatic fever patients ..	72	7	13	92 (39%)	108	200
Controls .. ..	29	25	13	67 (36%)	83	150
Chorea patients .. ..	10	7	3	20 (45%)	18	38
				179	209	388

$\chi^2$  for total dampness = 0.776 for two degrees of freedom. Probability > 0.6.



patients lived in houses where there was some degree of dampness. However, there is no significant difference between this number and that found among the control group of patients, some of whom suffered from respiratory tract infections. Note must nevertheless be made of rather exceptional circumstances prevailing during the period of study. Owing to the aftermath of war years, housing shortage was acute and many houses were in need of repair. Also an extraordinary hailstorm at the beginning of 1947 caused much damage and consequent dampness.

The figures obtained with regard to overcrowding (shown in Table XII) were also found to run closely parallel in the rheumatic fever and control groups.

TABLE XII.<sup>1</sup>  
Overcrowding.

Subjects.	Total Number in Group.	Overcrowding > Two Persons per Room.	Overcrowding.
Rheumatic fever patients ..	200	55	27.5%
Controls .. .. .	150	42	28.0%
Chorea patients .. ..	38	14	37.0%
Total .. .. .	388	111	—

<sup>1</sup> $\chi^2 = 2.04$  for two degrees of freedom. Probability = 0.36.

#### SEASONAL INCIDENCE.

One would expect the incidence of rheumatic fever to be greatest during the cold winter months of the year, as has been found to be the case in England,<sup>(45)(28)</sup> although in the United States of America it reaches its peak in the early spring months.<sup>(3)(30)</sup> In Australia no definite seasonal incidence has been demonstrated,<sup>(1)(4)</sup> and this investigation failed to show any great variation between the months.

From the histories of patients under the age of seventeen years suffering from acute rheumatism admitted to the Royal Alexandra Hospital, the Royal Prince Alfred Hospital, Sydney Hospital, Saint Vincent's Hospital and Prince Henry Hospital the month of onset in each case was obtained. (Cases in which the onset was insidious were omitted.) The results were tabulated and the monthly averages are shown in Table XIII. It can be seen that the average number of admissions is greatest at the end of the year, that is, in late spring and early summer, with a maximum in December. The difference is significant; but the variation within each month from year to year is wide, so that one would hesitate to state that this seasonal incidence is in any way definite. Similarly there is very little variation between the average monthly notifications of scarlet fever over an eight-year period, but

there is a rise, though very slight, towards the end of the year, with the maximum in November.

Table XIV shows the yearly admissions for rheumatic fever and the notifications of scarlet fever, and these results are shown graphically in Figure II. There is a pronounced rise in the figures for scarlet fever (which was selected because it is a notifiable disease, known to be caused by the hemolytic streptococcus) between 1943 and 1945, and a corresponding rise in the rheumatic fever curve over the same period. As the admission figures were taken from the same hospitals each year, this would seem to indicate a variation in the incidence of rheumatic fever from year to year, which can be correlated with the incidence of scarlet fever.

#### HEREDITY.

Opinions still differ somewhat as to the role which heredity plays in rheumatic disease. Thornton<sup>(46)</sup> in England found little evidence that it is an important factor. However, in America, Wilson<sup>(46)(47)</sup> found, in tracing family histories, that the incidence of cases in families followed the general law of recessive Mendelian inheritance. Paul<sup>(47)</sup> probably states the most popular view when he says that he "subscribes to the concept that susceptibility to rheumatic disease is inherited".

An attempt was made to demonstrate if this was true in Sydney. The mothers who supplied the information regarding environment were questioned concerning the family history of the patients in both the rheumatic and the non-rheumatic groups.

The results are shown in Table XV. It is evident that a significantly greater number of rheumatic fever patients than non-rheumatic patients give a family history of the disease, and we must assume from this that heredity plays some part in the development of rheumatic fever.

For the 200 rheumatic patients there were 207 relatives who had a history of rheumatic fever or chorea, and in the control group of 150 only 67 relatives, or 90 per 200. It is interesting to note that of the 200 patients with rheumatic fever 57 had relatives in their immediate family who had suffered from this infection; this compares closely with the investigation of 100 cases in South Australia,<sup>(2)</sup> where it was found that 30% had an immediate family history of rheumatic fever.

Some of the mothers were questioned regarding the family history of other diseases—namely, hay fever, asthma and nephritis. This was done because of the suggestion that rheumatic fever is another manifestation of allergy and because of the close connexion between the supposed aetiology of rheumatic fever and that of nephritis.

It will be seen that the percentage of patients giving a family history of allergy is very close in the two groups. There is a rather greater difference with regard to nephritis, but this may be due to chance. When there was a family history of rheumatic diseases other than rheu-

TABLE XIII.<sup>1</sup>

Disease.	Jan-uary.	Feb-ruary.	March.	April.	May.	June.	July.	August.	Sep-tember.	October.	No-vember.	De-cember.	Total.
Acute rheumatic fever:													
Total admissions (eight years)	77	62	74	60	68	60	68	75	69	95	85	98	881
Average monthly admissions	9.6	7.8	9.3	7.5	7.3	7.5	8.5	9.3	8.6	11.9	10.6	12.3	
Scarlet fever:													
Total notifications	1265	1278	1446	1463	1529	1345	1431	1516	1560	1532	1573	1379	17,517
Average notifications per month	158.1	159.7	180.7	182.8	191.1	168.1	178.8	189.5	195	191.5	196.6	172.3	

<sup>1</sup> $\chi^2 = 22$  for 11 degrees of freedom. Probability = 0.02.

TABLE XIV.

Disease.	1939.	1940.	1941.	1942.	1943.	1944.	1945.	1946.	Total.
Rheumatic fever, total ad-missions	85	85	91	97	132	151	133	107	881
Scarlet fever, total notifications	1997	1694	1964	847	2419	3296	3542	1758	17,517

TABLE XV.<sup>1</sup>

Group.	A. Patients with Close Relatives Affected by Rheumatic Fever.	B. Patients with More Distant Relatives Affected by Rheumatic Fever.	C. Patients with Both Close and Distant Relatives Affected by Rheumatic Fever.	D. Total Number of Patients with Relatives Affected by Rheumatic Fever.	No Family History of Chorea or Rheumatic Fever.	Total Number of Patients.
Rheumatic fever	31	60	26	117	83	200
Chorea .. ..	6	19	3	19	19	38
Controls .. ..	14	35	3	52	98	150
Total .. ..	—	—	—	188	200	388

<sup>1</sup> $\chi^2 = 13.44$  for two degrees of freedom. Probability = 0.001. A, close relatives = parents or siblings; B, more distant relatives = uncles, aunts, cousins or grandparents; C, relatives affected in both groups A and B.

TABLE XVI.<sup>1</sup>

Subjects.	Total Number.	Family History of Asthma. <sup>2</sup>	Hay Fever.	Family History of Allergy.	Family History of Nephritis.	Family History of Nephritis.
Rheumatic fever patients	155	40	8	31.9%	20	12.9%
Controls .. ..	150	36	10	30.7%	12	8.0%
Total .. ..	305	76	18	—	32	—

<sup>1</sup> $\chi^2$  for nephritis = 0.758 with one degree of freedom. Probability < 0.10.

<sup>2</sup>Where there was a family history of both hay fever and asthma the patient was put in the "asthma" group.

matic fever and chorea it was thought that the history might not be very accurate, because of the tendency to ascribe every ache and pain to "rheumatism". However, an attempt was made to rule out the doubtful cases, and it was found that 30.9% of rheumatic fever patients gave a family history of other rheumatic diseases, and only 18% of the controls.

#### DIET.

Poor diet is one of the factors which, along with bad housing and poverty, has always been regarded as a predisposing cause of rheumatic fever. Coburn and Moore<sup>(49)</sup>

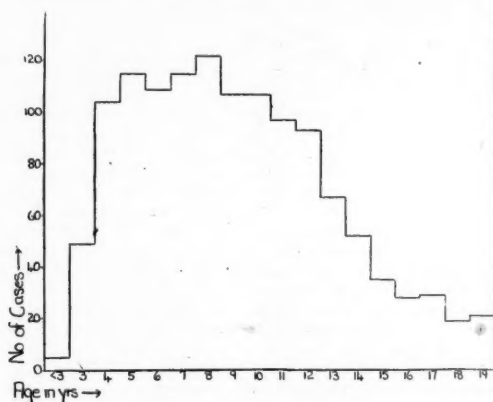


FIGURE III.

To show the age incidence of first attacks of rheumatic fever.

have found that there was a significant diminution in the relapse rate of a group of convalescent rheumatic patients whose diet was fortified with extra animal protein in the form of eggs. Insufficient vitamin C in the diet has also been considered as a factor, and this may occur in the case of rheumatic children receiving a diet which would be adequate for normal children. It has been suggested that these patients, even in the inactive stage of the disease, may have an increased metabolism of this vitamin and hence an increased need for it.<sup>(49)</sup>

Mothers of rheumatic children (200) were questioned about the diet taken by the patients, with special regard to the intake of animal proteins, fresh fruit, vegetables and milk. This method is of course unsatisfactory, as it depends on the individual observation of so many different people. However, the general impression was that the diet in most instances was satisfactory. In nearly 75% it was classified as good or fair. In a quarter of the cases there was a history of bad appetite and capricious eating, which would lead to an insufficient intake of essential foods, and in only 2% was it considered that these were certainly lacking.

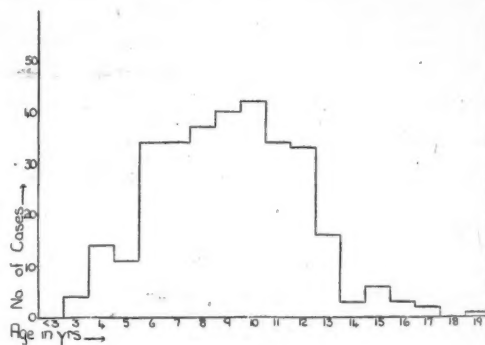


FIGURE IV.

To show the age incidence of first attacks of chorea.

#### OTHER FACTORS.

Other factors investigated are those which vary in the individuals themselves.

#### Age.

The age at the first attack of chorea and rheumatic fever was taken from the histories examined at all the hospitals mentioned (1421 cases of rheumatic fever, 314 of chorea). The results are given graphically in Figures III and IV, which show that the peak for rheumatic fever is from four to twelve years and for chorea from six to twelve years. There were no first attacks of chorea after the age of nineteen years; but the range for rheumatic fever is considerable, there being a few cases in most age groups from

twenty-five onwards, the number gradually diminishing up to the age of fifty years, after which there were only five cases regarded as first attacks of rheumatic fever.

These figures correspond closely with others on record. Wilson,<sup>(40)</sup> of America, mentions the greatest incidence of first attacks as being from four years to puberty, with an average of six years, and in England<sup>(41)</sup> the most common age for first attacks was found to be between five and ten years.

#### Enlargement of Tonsillar Glands.

In view of the fact that tonsillar infection is regarded as being an important feature of rheumatic fever, an examination was made of the tonsillar glands of 100 rheumatic patients while they were still in hospital during the active phase of the disease (in nearly all instances soon after admission to hospital) and, as controls, of the glands of 100 other hospital patients. These were all children, and some degree of enlargement was a very common feature. It can be seen that there was no significant difference between the state of the tonsillar glands in the two groups.

TABLE XVII.

Tonsillar Glands.	Rheumatic Patients.	Controls.	All Patients.
Not palpable or very slightly enlarged	18	12	30
Noticeably enlarged	68	77	145
Much enlarged	14	11	25
Total	100	100	200

$\chi^2 = 3.024$  for two degrees of freedom. Probability = 0.22.

#### Hair Colouring.

It is a popular belief that the red-haired, freckled type of person or the blond, blue-eyed subject is more susceptible to rheumatic fever than darker people. Perhaps it is because these colourings will attract attention, while one forgets the many with more common coloration of hair and eyes. Table XVIII represents the results found upon investigating 150 rheumatic patients at the Royal Alexandra Hospital for Children either in the active stage or attending the follow-up department as convalescents, and compares the colouring of these patients with a control group. There is a close similarity in the numbers of patients, both rheumatic and controls, occurring in each group, and in this series there was no predominating colour among the rheumatic patients.

Similarly, no difference was discovered in the tendency to freckles among the rheumatic and control patients (Table XIX).

#### CONCLUSIONS.

At present there is no known means of preventing an attack of rheumatic fever. Prophylaxis must be directed towards preventing further recurrences in those who have

already suffered from the disease, with the hope that the heart may escape permanent damage if the onslaught upon it is not too prolonged or too often repeated. Many of the present-day writers believe that streptococcal infection is a major factor in precipitating an attack of rheumatic fever, so it is not unreasonable to aim at preventing such an occurrence. This may be done by avoiding the risk of exposure to upper respiratory tract infection, particularly shunning overcrowded enclosed spaces when streptococcal disease is widespread in the community. However, as man is by nature gregarious, one would expect the counsel of perfection to have but little influence upon the subsequent course of the disease.

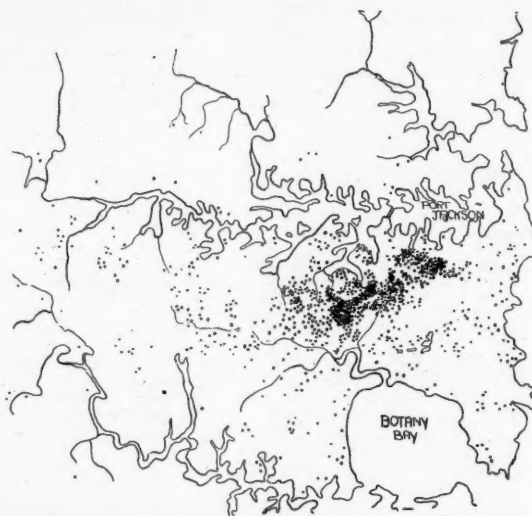


FIGURE V.

To show the distribution of rheumatic fever and chorea in the metropolitan area, based on 1000 cases over a ten-year period. Each dot represents one case.

Wasson and Brown<sup>(42)</sup> in America claim good results from attempted immunization against rheumatic fever by means of a toxin prepared from a strain of hemolytic streptococci. Prophylactic use of the sulphonamides, aimed at controlling streptococcal infection, is well known and in many instances has been successful. If this method is used in Sydney, where rheumatic fever is prevalent in the summer months, regular dosage should be continued throughout the year. Widespread prophylaxis of this nature requires constant supervision of the patient, together with much laboratory work in order to safeguard him against any ill effects of the drug, and there is always to be borne in mind the rather disquieting reports from America of the occurrence of sulphonamide-resistant strains of streptococci;<sup>(43)</sup> however, this followed mass

TABLE XVIII.<sup>1</sup>

Hair.	Eyes.					Total.
	Blue.	Blue-green or Blue-grey.	Green or Hazel.	Light Brown or Brown.	Dark Brown.	
Blond	22 (26)	3 (3)	(3)	2 (0)	—	27 (32)
Light brown	18 (22)	13 (6)	11 (14)	9 (14)	3 (4)	54 (60)
Brown	6 (6)	1 (1)	4 (10)	6 (7)	3 (6)	20 (30)
Dark brown	4 (0)	3 (2)	9 (2)	3 (4)	8 (7)	27 (15)
Red	1 (3)	—	1 (1)	2 (0)	1 (0)	5 (4)
Sandy	6 (6)	2 (1)	5 (0)	4 (2)	—	17 (0)
Total	57 (63)	22 (13)	30 (30)	26 (27)	15 (17)	—

<sup>1</sup> Control subjects are shown in parentheses.  $\chi^2$  for hair colouring = 8.738 for five degree of freedom. Probability = 0.123.



prophylaxis with the sulphonamides and would be an unlikely development in Sydney.

Moreover, in view of the damage done to the heart by rheumatic fever, there is such a grave risk facing the rheumatic child who suffers recurrent attacks of the disease that one would hesitate to withhold sulphonamide prophylaxis on the grounds that such a procedure was too dangerous.

Coburn<sup>(33)</sup> has suggested an alternative method, that of giving large doses of salicylate upon the development of pharyngitis in a rheumatic subject, and the continuance of treatment with this drug if haemolytic streptococci group A are grown from the throat. From his reports it would appear that this method is effective; however, it

TABLE XIX.

Freckles.	Rheumatic Fever Patients.	Controls.	All Subjects.
Few freckles .. .. .	45	59	104
Moderate freckles .. .. .	27	17	44
Many freckles .. .. .	6	7	13
No freckles .. .. .	72	67	139
Total .. .. .	150	150	300

<sup>1</sup>χ<sup>2</sup> all degrees of freckling = 0.154 for one degree of freedom. Probability > 0.69.

would not protect many patients, particularly children, who develop recurrences without any symptoms of a preceding sore throat.

Good living conditions, adequate food intake and sufficient rest are probably as essential in building up the general resistance and preventing invasion by haemolytic streptococci as they are in keeping dormant the rheumatic process. With regard to rest, it must certainly seem advisable that if these children are to endure prolonged periods of reduced physical activity, more provision should be made for their education and recreation, particularly in view of the fact that those whose hearts have already been damaged will be able to earn their living only in a sedentary occupation.

A warm, dry climate is probably preferable for a rheumatic child, and living in overcrowded industrial suburbs should be avoided. The factor of any inherited predisposition to the disease is a hard one to combat; but it would not perhaps be amiss to advocate early and vigorous treatment in any case of suspected rheumatic fever in which there is a strong family history of the disease.

#### SUMMARY.

Throat swabbings were taken from 97 rheumatic patients and an equal number of controls on their admission to hospital, and haemolytic streptococci group A were found in 23.7% of the former group and in only 5.2% of the controls. The throats of these patients were also examined and the two groups were compared with regard to the presence of throat infection and the number who had undergone tonsillectomy.

Over 1000 case histories of rheumatic fever from some of the larger metropolitan hospitals were examined and 200 mothers of juvenile patients were questioned specifically about infections preceding the rheumatic fever, environmental factors and family history.

Of the group of 200 juvenile patients questioned, 46.3% gave a history of a preceding upper respiratory tract infection. Other illnesses occurring prior to the rheumatic fever were discussed and the question was raised whether there might be some site of entry for the haemolytic streptococcus other than the naso-pharynx.

Rheumatic fever was found to occur more commonly in certain districts in Sydney; but little difference was discovered with regard to the incidence of dampness and

overcrowding in the home in a rheumatic fever group and in a control group.

Over 50% of rheumatic fever patients gave a family history of the disease, as compared with 35% of control patients.

Little variation was found in the seasonal incidence of rheumatic fever in Sydney, but there was a tendency for it to be greatest towards the end of the year.

The age incidence of rheumatic fever and chorea was determined for the cases studied, and factors such as diet and hair colouring were examined.

In conclusion, one would expect that the person most likely to develop rheumatic fever would be a child between the ages of four and twelve years, with a family history of the disease, living in an overcrowded area and exposed to a group A haemolytic streptococcal infection.

#### ACKNOWLEDGEMENTS.

I wish to express my gratitude for all the help given to me by many different people throughout the year. In particular my thanks are due to Professor H. K. Ward, Dr. L. Hughes and Dr. L. Dods for supervising the study; to the board of the Royal Alexandra Hospital for Children for granting me residency at the hospital, and to the members of the hospital staff for access to their patients and for all their ready assistance and cooperation. Also I should like to thank the hospital superintendents for permission to examine their records, Dr. Phyllis Anderson for invaluable aid with the bacteriological investigation, and Dr. H. O. Lancaster for guiding the statistical analysis. Last, but not least, I am indebted to the mothers who willingly gave any information required, and to the cheerful cooperation of the small rheumatic fever patients.

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## Reports of Cases.

### TREATMENT OF HÆMOPHILUS INFLUENZÆ MENINGITIS WITH STREPTOMYCIN.

By TREVOR WILLIAMS,  
Gilgandra, New South Wales.

It may be of interest to the medical profession generally to know of my experience with a baby suffering from *Hæmophilus influenzae* meningitis and her response to streptomycin treatment.

#### Clinical Record.

Late in May, 1947, I was called to see a baby, aged six months, who had a temperature of 102° F. and who was vomiting her feedings and was generally irritable. On examination of the child there was no neck rigidity, but the anterior fontanelle was bulging. The baby was admitted to hospital on May 31 and was treated as suffering from meningitis. On her admission her temperature was 102° F., and penicillin injections were commenced. On June 2 slight head retraction was present. Lumbar puncture was performed and approximately one-third of a test tube of turbid fluid was withdrawn and 40,000 units of penicillin were injected intrathecally. Examination of the cerebro-spinal fluid showed the presence of *Hæmophilus influenzae* in direct smears and in a culture. Penicillin therapy was continued till June 4, when the results of examination of the cerebro-spinal fluid were received. Penicillin therapy was discontinued and sulphadiazine was given, half a tablet every four hours. At this stage the baby was tube fed, some of the feedings being vomited in part.

The baby's condition remained approximately the same, with the temperature varying from 104° F. to normal and the fontanelle bulging; but no great head retraction or rigidity was present. The administration of magnesium sulphate *per rectum* was tried in an endeavour to reduce the cerebro-spinal fluid pressure, with some success. With the reduction of the cerebro-spinal fluid pressure the baby's condition improved. However, this improvement was only temporary, and the temperature continued to rise to 103° or 104° F. with increased cerebro-spinal fluid pressure and corresponding increase in irritability and deterioration in the child's condition.

At no time did the baby show the typical clinical picture of meningitis—marked head retraction, rigidity, meningitic cry *et cetera*—and though she showed loss of condition, it was not so noticeable as one would expect. This picture was followed for approximately six weeks with exacerbations. Naturally the baby's condition was slowly falling away, and at the beginning of the sixth week (July 5) her condition was low; vomiting, marked head retraction and back rigidity were present. She was cyanosed at this stage, and on July 6 "Coramine" and oxygen were given, whilst the feedings were glucose and water every two hours.

At this stage I learnt that streptomycin was available, but I was doubtful whether it would arrive in time. However, the streptomycin arrived on July 11 and injections were commenced. The doses given were purposely large, according to the manufacturer's pamphlet, and a careful watch was kept for any toxic signs. An intrathecal injection of one millilitre (100 milligrammes) was given *statim* and 0.5 millilitre (50 milligrammes) was given every three hours. Lumbar puncture produced slightly turbid fluid. Lumbar puncture was performed daily for five days, with the injection of one millilitre (100 milligrammes) of streptomycin, whilst the intramuscular injection of 0.5 millilitre (50 milligrammes) every three hours was continued for ten days. In all, five grammes of streptomycin were administered.

For the three or four days prior to the commencement of streptomycin treatment the baby's temperature was normal, but from approximately two hours after the first

intrathecal injection of streptomycin for forty-eight hours her temperature went from 100° F. to normal, and from then till her discharge from hospital seven weeks later, on August 26, it remained normal.

For six days after the institution of streptomycin therapy the baby's condition remained the same, with one thing in her favour—that her feedings were taken more freely with very little vomiting. After the fifth day she appeared to be brighter, taking feedings from the bottle and generally looking better, though considerable head retraction and spinal rigidity were present. This state of affairs continued, with slow improvement and good increases in her weight (five to seven ounces per week).

Whilst the streptomycin therapy was continuing it appeared to me that the baby was blind. This was confirmed by an eye specialist, who found sluggish response to light of both pupils, small retinal hemorrhages in the left eye and papilledema. The baby is still very well, but has massage daily for the slight rigidity in the neck and spine.

#### Comment.

My prime object in writing this story is to let medical men know of my experience, particularly with regard to the doses given intrathecally and intramuscularly to a baby suffering from *Haemophilus influenzae* meningitis—1.0 millilitre (100 milligrammes) per day intrathecally and 0.5 millilitre (50 milligrammes) every three hours for ten days.

The only toxic symptom which occurred (if it can be so described) was the increase in temperature for forty-eight hours after the institution of streptomycin therapy.

## Reviews.

### A YEAR BOOK OF THERAPEUTICS.

"THE 1947 YEAR BOOK OF GENERAL THERAPEUTICS" is edited, as its predecessor was, by Oscar W. Bethea, and one of its most satisfactory features is the editor's contribution.<sup>1</sup> Comments on individual matters are always brief and to the point, and each subsection is introduced by a short note which points out the essential feature or features of the subsection or raises a thought-provoking question. The volume is, as usual, a careful selection of abstracts from world literature during the approximate period September, 1946, to August, 1947. The journals covered are in the main North American with a fair selection from British publications. Continental material is present, but only in very small amount. Three articles from Australia are mentioned: two on the treatment of thyrotoxicosis by Harold J. Ritchie and by Ivan Maxwell, G. Gunter and K. Schwarz respectively, and one by Peter Braithwaite on blood transfusions in malarious areas.

The material is arranged into five groups. The first, concerned with "general therapeutic technique", contains a small series of articles on diagnostic tests and various comments related to diagnostic and therapeutic methods. The next group covers antipathogen therapy; a wide range of articles on penicillin and streptomycin are included; anti-parasitic drugs and various unsolved aspects of the malaria problem are discussed; the old question of salicylates and rheumatic fever comes up again, and support is offered for gold therapy in rheumatoid arthritis; a variety of papers are included under the heading of "antibodies and antigens". In the section on restoratives prominence is given to various aspects of blood transfusion and the use of various fractions of the blood; to the vitamins, especially folic acid; to protein and amino acid therapy; and to hormones. The section on "function modifiers" includes anaesthetics; sedatives, hypnotics and antispasmodics; drugs used to treat thyroid disorders (especially those of the thiouracil group); those acting on the autonomic nervous system (notably the antihistamine substances); and those acting on the heart and blood vessels, with special reference to the anti-coagulant group. The volume concludes with a section on miscellaneous therapeutic measures in which are mentioned,

<sup>1</sup>"The 1947 Year Book of General Therapeutics", edited by Oscar W. Bethea, Ph.M., M.D., F.A.C.P.; 1947. Chicago: The Year Book Publishers Incorporated. 7" x 4½", pp. 456, with illustrations. Price: \$3.75.

amongst other things, B.A.L., radioactive phosphorus and the nitrogen mustards. The index of subject matter and the index of authors are as usual satisfactory. It would be interesting to know whether the spelling of Sydney as "Sidney" on page 325 is a typographical or an editorial error. Otherwise we have nothing but praise for this book which would be of interest and value to any medical practitioner.

### TREATMENT OF THE EYE IN THE CONSULTING ROOM.

ELIAS SELINGER, in his "Office Treatment of the Eye", has endeavoured to produce a book in which routine ophthalmological treatments and what he calls office procedures are described in detail.<sup>1</sup> Generally speaking it may be said that the author has fulfilled his ambition. Practically the entire book is concerned with treatment, very little attention being given to aetiology and the clinical picture of the conditions treated; in fact descriptions given in some instances are so scanty as to be of very little value.

Most of the procedures mentioned and described will meet with general approval, although not all will agree with the routine use of atropine after a pterygium transplant, the use of a mydriatic in traumatic hyphema, and the closure of a filtering scar if a detached choroid has persisted for one month after a fistulizing operation. The presence of pannus in trachoma is not usually regarded as a contraindication to the use of copper sulphate, as is stated by the author. The inclusion of rare conditions such as Harada's disease could well have been omitted from a book such as this, and mention might have been made rather of such facts as maternal rubella in the aetiology of congenital cataract.

The chapter on chemotherapy is particularly good and is a fitting introduction to any book on treatment in these days when chemotherapy has become a sheet anchor. The appendix, which is devoted to iontophoresis, is instructive and most useful. Mention of the use of drugs such as "D.F.P." in glaucoma and "Dicumarol" in venous thrombosis is also interesting.

All in all, the advice given is sound and lucid, the text is singularly free of error, while the general format of the book is excellent.

### CANCER OF THE BREAST.

"CANCER OF THE BREAST", by Duncan C. L. Fitzwilliams, would better be entitled "Notes on Cancer of the Breast". This is not written in a disparaging sense, as the author makes no claims that his book is a complete treatise on the subject. The book is divided into two parts, firstly that dealing with surgery, and secondly that dealing with radiotherapy. The surgical part would call for little comment were it not for the fact that the author makes the startling claim that the disease in its early stages need be treated by local operation only. In making this claim the author, of course, also makes the claim that he can diagnose a given cancer as being in an early stage. The radical operation for cancer of the breast has been brought to its present stage by long and careful correlation of surgical, pathological and anatomical studies. The modern view is that when confronted with a cancer of the breast the surgeon is never able to say with absolute certainty that the cancer cells have not already spread widely through the breast and surrounding tissues. The surgeon knows that in many cases this may not have happened, and in fact Dr. Fitzwilliams produces many cases in which local removal has been successful. This does not alter the surgeon's outlook, however. He knows that in some of the apparently early cases the disease may have already spread widely, and that in such cases the only possible cure is by radical excision. Therefore, until some method has been discovered of finding out whether the disease is localized or not, he adopts, as the only safe method, the procedure of treating all cases as if they had already spread widely. It may be said that Dr. Fitzwilliams has not produced sufficient evidence to warrant the use of local excision in apparently early cases.

<sup>1</sup>"Office Treatment of the Eye", by Elias Selinger, M.D.; 1947. Chicago: The Year Book Publishers, Incorporated. 9" x 6", pp. 542, with many illustrations. Price: \$7.75.

<sup>2</sup>"Cancer of the Breast", by Duncan C. L. Fitzwilliams, C.M.G., M.D., Ch.M., F.R.C.S. (Edinburgh and England); 1947. London: William Heinemann (Medical Books), Limited. 8½" x 5½", pp. 208, with many illustrations. Price: 25s.



As far as the radiotherapeutic section of the book is concerned, it must be pointed out that the procedures recommended are very different from those in use in advanced Australian clinics. This is very surprising and draws attention to the wide differences in procedure which are found in different parts of the world. It is high time that these differences were eliminated. Efforts should be made by the radiotherapists of the world to produce procedures which are based upon common principles.

#### CHRONIC DISEASES.

The first edition of A. T. Todd's book on the treatment of some chronic and "incurable" diseases was reviewed in this journal on December 18, 1937. A second, revised edition has now appeared, which contains new chapters on vascular insufficiency in diabetic and senile gangrene, on neurosis and dysmenorrhœa (an unusual juxtaposition), on "aphthous disease" (little ulcers in the mouth and elsewhere), and on current medical psychology. It is always stimulating and often instructive to read the work of a heterodox practitioner of an original turn of mind, especially when he presents reasoned argument well grounded in physiology and pathology; however, the reader of this book cannot help feeling very much on his guard when he finds that the author's emphatic heterodoxy embraces not some one or two diseases, but every disease. Moreover, Dr. Todd seems to have become rash at times in his statements and less temperate in expression in the last ten years. In the present edition, for example, referring to electroencephalography, he writes: "... just as the diagnosis of phthisis is being monopolized by radiologists, so is the diagnosis of epilepsy from the medico-legal side being considered as one for the electroencephalogram, and this tendency is going to lead to many most unjust and dangerous legal decisions." The exposition of the causes of myocardial degeneration, though interesting, is fanciful to a degree, and in parts does not accord with the established physiology of the coronary circulation.

#### NEUROTIC ILLNESS.

The first edition of "Clinical Studies in Psychopathology" appeared in 1939, since when, as he informs us in the preface, Professor Dicks has seen no reason to change his point of view regarding the psychopathology of the more common neuroses.<sup>1</sup> One may ask why Dr. Dicks refers to the "more common" neuroses rather than to psychoneurosis in general. He is a psychoanalyst who owes no strict allegiance to any particular school, though he has a leaning towards the Freudian method and interpretation, and the clinical material on which his own theories are based is fairly representative of the whole field of psychoneurotic reactions, including anxiety states, phobias, obsessions, hysteria, sex perversions and drug addiction. While he admits the possibility that the "memories" recalled by the patient under analysis may be suggested by the analyst, he would appear to have no reservations about accepting, as genuine the recall of experiences dating back to two years of age. For example, a man of forty years of age with severe claustrophobic anxiety under analysis recalled the tent over his cot, forcible giving of medicine, and other details which, to quote Dr. Dicks, "made it certain that we were dealing with an actual memory of respiratory illness. It was ascertained that at the age of eighteen months he had had an attack of bronchopneumonia". Further analysis revealed how he had experienced anger and aggression towards his mother who had stood by unable to help him in his distress. At the age of seven this same patient had a severe attack of anxiety in church—the Gothic arches represented the tent over his cot. This man finally came up for treatment for anxiety precipitated by difficulties over adjusting himself to civil life after distinguished war service. Unfortunately in so many of Dr. Dicks's cases we are not informed as to the therapeutic effect of these psycho-analytic revelations. But the book is concerned with psychopathology, the mechanism of psychoneurotic symptoms and

their supposed psychological causes, not primarily with treatment. And as regards causation Dr. Dicks joins issue with Elliot Slater over the question of nervous constitution (see *Journal of Neurology and Psychopathology*, Volume VI, 1943, Numbers 1 and 2).

Dr. Dicks maintains that, to quote him again: "Analytical study has driven home the lesson that in the approach to what matters most to human beings scientific formalism has to be supplemented by a readiness to share with the patient the kind of emotional events and experiences which result in his current personality and behaviour." (Freudian abreaction and recapitulation of child-parent attitude in the relationship between patient and analyst.) Again and again Dr. Dicks has traced the symptoms back to feelings of frustration and anger over being deprived at or of the breast. But any explanation will afford relief to some patients, and not all of Dr. Dicks's subjects, as he frankly admits, completed their treatments.

This book is no elementary guide to the handling of the psychoneurotic, but those who engage in intensive exploration of the mind will wish to compare their own findings with those of Dr. Dicks, and the advanced student of psychiatry will find in the work much to interest him.

#### A YEAR BOOK ON DISEASES OF THE EYE, EAR, NOSE AND THROAT.

"THE 1947 YEAR BOOK OF THE EYE, EAR, NOSE AND THROAT" has been prepared by the editors who were responsible for the corresponding volume in 1946, and the same high standard is evident. A wide range of medical literature is covered and the increased number of references to European journals and authors is notable.

The editor of the part concerned with the eye, Louis Bothman, contributes, as an introduction, a short article dealing with suggestions for accurate records in ophthalmology; he revives a scheme of classification of normal optic disks put forward by Elschnig in 1900, draws attention to a method described by Kestenbaum for recording the exact position of small retinal lesions, and points out how distances can be measured on the fundus with reasonable accuracy by means of the ophthalmoscope. The abstracts are arranged under anatomical headings with further sections on glaucoma, neurology and visual fields, refraction and muscles, injuries, therapy, surgery, general and miscellaneous considerations. The material covered is extensive and diverse so that detailed comment is impracticable. It is interesting, however, to note a very cautious attitude towards the local application of penicillin to the eyes and a number of encouraging reports on the use of the miotic di-isopropyl fluorophosphate (DIP) in the treatment of glaucoma; conflict of opinions still exists on the treatment of such conditions as retinal detachment and chronic glaucoma. A summary is included of the monograph on ocular vertical deviations by J. Ringland Anderson, of Melbourne.

Samuel J. Crowe, who has prepared the parts on the ear and on the nose and throat with the collaboration of Elmar W. Hagens, discusses in some detail the development of a radium applicator for the irradiation of the nasopharynx, trachea and bronchi. The literature on the ear is grouped into sections on fundamental considerations, which covers papers on development, anatomy and physiology; on trauma; on the fenestration operation from which further satisfactory results are reported; on Ménière's disease, with special attention to both its conservative and its surgical treatment; on miscellaneous subjects; and on treatment, in which most attention is paid to chemotherapy for intracranial complications.

The part on the nose and throat opens with a section on miscellaneous conditions, the remainder being divided under anatomical headings. Among many aspects surveyed frequent references occur to the use of antibiotic agents, including a paper on penicillin in the treatment of infections in nasal passages and sinuses by Richard E. Dunn, of Sydney.

It is difficult to imagine any eye or ear, nose and throat specialist being so prolific a reader that he can afford to neglect this volume (or its predecessors and successors). Others, particularly the general practitioner and physician, will also find it useful. Its general production is excellent.

<sup>1</sup> "Treatment of Some Chronic and 'Incurable' Diseases", by A. T. Todd, O.B.E., M.B. (Edinburgh), M.R.C.P. (London); Second Edition; 1947. Bristol: John Wright and Sons, Limited. London: Simpkin Marshall, Limited. 8½" x 5½", pp. 338. Price: 25s.

<sup>2</sup> "Clinical Studies in Psychopathology: A Contribution to the Aetiology of Neurotic Illness", by Henry V. Dicks, M.A., M.D. (Cantab.), F.R.C.P. (London); Second Edition; 1947. London: Edward Arnold and Company. 8½" x 5½", pp. 238. Price: 15s.

<sup>3</sup> "The 1947 Year Book of the Eye, Ear, Nose and Throat." The Eye, edited by Louis Bothman, M.D.; The Ear, Nose and Throat, edited by Samuel J. Crowe, M.D., with the collaboration of Elmar W. Hagens, M.D.; 1947. Chicago: The Year Book Publishers, Incorporated. 7" x 4½", pp. 488, with many illustrations. Price: \$3.75.

# The Medical Journal of Australia

SATURDAY, APRIL 17, 1948.

All articles submitted for publication in this journal should be typed with double or treble spacing. Carbon copies should not be sent. Authors are requested to avoid the use of abbreviations and not to underline either words or phrases.

References to articles and books should be carefully checked. In a reference the following information should be given without abbreviation: initials of author, surname of author, full title of article, name of journal, volume, full date (month, day and year), number of the first page of the article. If a reference is made to an abstract of a paper, the name of the original journal, together with that of the journal in which the abstract has appeared, should be given with full date in each instance.

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## THE PROGRESS OF PUBLIC HEALTH.

MEDICAL PRACTITIONERS read and hear so much about preventive medicine that they are likely to accept it as something that occurs naturally and not as something that requires to be pursued with ever-increasing zeal. That the successful practice of preventive medicine depends largely on the adoption of a certain attitude of mind by medical men and women is widely recognized, as is the urgent need to bring about the acquisition of a similar attitude by the general public. If everyone is determined to do something, that thing is already half done. Determination alone is not sufficient; the desired result will not be achieved if the determining parties do not agree to act together. In matters of the prevention of disease the members of the medical profession have the initial task—they must persuade the members of the public and the legislators (when legislative action is needed, as it nearly always is) that actions of a certain type are desirable. The public must be enthusiastic enough to demand action and to do its share in what that action entails; and the legislators, particularly the keepers of the purse, have to act. We all know how easy it is when the public health is in question to blame the Government or the ministerial head of a government department because what we want does not happen. Very often this is the right thing to do, and it is common knowledge that august ministers seem to find it much easier to make promises than to keep them. Sometimes, however, we do well to ask ourselves whether we, as medical practitioners, have been sufficiently insistent on what ought to be done, whether we have presented the problem in the best way and whether we have done all that we should have done in the education of the public about it. Leaving on one side the part taken by the general members of the community and also the role of the Government or of the ministerial head, we may with advantage pay some attention to medical practitioners in relation to preventive medicine. Reference has already been made to the acquisition of an attitude of mind by practitioners of medicine. This applies alike to those in general and special practice as well as to those who hold appointments

in health departments, in other government departments and in industrial undertakings. We know that in the past prevention was looked on as being the job of the "health doctor" who was supposed to spend his time in looking after drains, in the recording of infectious disease and in the ordering of fumigation and so on. We also know that those days have long passed and that little good is done by reference to them, except to show that progress has been made. Those who do not realize the extent of this progress have only to look through one of the annual reports of one of the State health departments. It will be seen at once that the activity of the medical officer of public health touches the work of the general practitioner at many points. That cooperation is called for between the practitioner and what we may call the health doctor will be obvious. And, of course, we all know it. Here is where this peculiar attitude of mind comes in. The general practitioner will think not only of seeing that his patient recovers, but will try to find out why he became ill and whether anything can be done to prevent a recurrence of that illness. In such endeavours he may have to call on the aid of the public health doctor. The health doctor, too, needs to have a mental attitude that sees patients—men, women and children, alive, sentient and suffering—and not just so many cases of infection which demand action planned according to a set routine. It should be emphasized that the general practitioner and the health doctor are equally members of the profession of medicine, are equally bound by its obligations and are equally entitled to any status that it may confer. For this reason we cannot see that there is any need for emphasis on "the professionalization of public health", as has been made by William P. Shephard, Chairman of the Committee on Professional Education of the American Public Health Association.<sup>1</sup> The reason given by this author for his stress on the fact that public health has become a profession is that its personnel comes from several professions—medicine, dentistry, engineering, nursing, education, social work and so on. A medical practitioner, a dentist or an engineer does not become less a member of his own profession because he accepts a position in a public health department. If Shephard means that out of all the component professions a new profession has been created that is a different matter. Such an idea might give an added dignity to public health work, but, even so, there is no need to seek added dignity for the public health medical officer who already has membership of, and owes allegiance to, an old and honourable profession and has to face the responsibilities associated with that allegiance.

The American Public Health Association has been celebrating its seventy-fifth birthday, and the special issue of the journal containing Shephard's article has been published for that reason. It cannot fail to act as a stimulus to public health medical officers in this country. The title of the number, "Public Health in Midstream", shows the idea actuating the publishers. Three papers deal with the heritage of the past and four with the seed of the future. Some mention has already been made of the past. When we come to think of the future we should remember that the conditions of life have altered during the last few years in a remarkable way. Apart from the war with its aftermath of devastation, of poverty, of

<sup>1</sup> American Journal of Public Health and the Nation's Health, January, 1948, Part 2.

distrust and of fear, the world has become smaller—air travel and the radio have brought the most distant countries closer together, so that the nations may be said to live almost cheek by jowl. Life seems to be lived at an increased pace and with greater intensity than has been known before. This cannot fail to have an effect on the public health—and not on the public health alone, of course, but on all other aspects of life. If it was possible to say that this or that defect in health was due to one or more defined factors the course of action to be adopted would be clear. It is an intermingling of causes and effects that makes correction or reconstruction difficult. As in almost every walk of life therefore man has to face his job and do it to the best of his ability. We shall agree with Haven Emerson, who writes on the unfinished job of essential public health service, that to obtain the desiderata demands determination, a will to succeed, imagination, resourcefulness, patience and a sense of humour to make us laugh at the inadequate distribution of public health services "before the scrutiny of an increasingly critical public, at home and around the world". Emerson writes this after he has explained that there are in the United States 40,000,000 people without local health departments. We in Australia may reflect on the state of public health inadequacy in Western Australia revealed recently by Dr. Cecil E. Cook, and described in this journal in the issue of February 14, 1948. Likewise Thomas Parran, the wise and careful Surgeon-General of the United States Public Health Service, writing about the surmounting of obstacles to health progress, compels attention when he writes about the will to succeed. He quotes the phrase that the United States has "an economic power unique in human history"; and he states that, given the will to use this power for human health comparable with the will displayed to win the war, his nation may attain and help the rest of the world to attain a standard of health "unique in human history". That the future attainment of health must involve some solution of the social and economic factors of disease is emphasized by the title of C. E. A. Winslow's article, "Poverty and Disease", and Raymond B. Fosdick concludes the special issue of the journal with a discussion on public health and the future. Fosdick believes that bricks in the bottom tiers of the edifice of international society will be supplied by "the common aspiration of all men everywhere for better health and a better life, and by their willingness to join forces to secure it".

Though on this occasion the message is chiefly for the public health medical officer, we must return to the theme with which we started, that he ranks with the private practitioner and that with the latter he has to take the lead in the battle for preventive medicine.

### Current Comment.

#### SEVERE FORMS OF INFECTIVE HEPATITIS.

WHEN the disease now known as infective hepatitis and believed to be due to a virus was called "catarrhal jaundice" it was thought to be a more or less benign illness. Certain features of attacks of jaundice not due to mechanical cause at times even then raised a suspicion that the liver did not always escape so completely as appeared to be the case. For example, it was noted that

patients suffering from nodular sclerosis of the liver were at times subject to attacks of jaundice, though there seemed some reluctance to ascribe both conditions to a common cause. Even at the beginning of the war period, when, as usual, epidemics of infective hepatitis began to disturb military operations on various fronts, there were instances of recurring and severe jaundice, which disturbed the widely held optimism that serious sequels did not occur. However, all over the world more severe attacks were seen as time went on, and there seems now little doubt that these were due to the same cause as the better known form of infective, non-leptospiroid jaundice.

J. F. Stokes and A. A. Miller have described in detail an outbreak of severe infective hepatitis in Burma.<sup>1</sup> They remark that in the past hepatic necrosis has not been a sufficiently frequent complication of the disease to attract the attention it deserves. The death rate has been low in all epidemics recorded in wars of past years, but even a figure of 0.2% over all is not negligible. In South Burma between July, 1945, and January, 1946, 24 deaths occurred among 1200 sufferers. These deaths, and ten more observed in the following six months, have been analysed by the authors, and a synthesis of the clinical findings made for the whole epidemic. They found that two clinical types were recognizable, an acute and a subacute, but point out that the pathological processes underlying these are essentially the same. In the acute variety coma occurred with surprising speed, so that its cause was not always recognized. Death usually took place within forty-eight hours of the final phase of the illness. In the subacute type there was time for ascites to appear. The earlier history of the attack was not specially different from that of a milder attack, but after a period of two to twelve weeks, during which deep jaundice persisted, ascites was discovered. After a further interval of a week or more death took place in some instances after preliminary coma. Some patients recovered even after the onset of coma. In the case of one patient who recovered in this series investigation of the liver by biopsy a year later showed normal architecture. Full pathological studies were made in all the fatal cases. Some correlation could be made between the pathological findings and the duration of the illness. The authors think that there is evidence of a more virulent strain of the specific virus existing in Burma over the period of their study. The incidence rate of the disease was not increased during that period, but rather decreased, but they explain this by a steady improvement in hygiene since the end of the war in Burma. There seems to be no doubt that the fatalities were due to the same infection as that causing the milder forms of illness. Other possible causes of infection, such as leptospirosis, have been examined, and can reasonably be excluded. On pathological grounds there also seems no reason to doubt the unity of the process at work, even though the findings in some of the fatal cases were unusual. For instance, in the acute fulminating infections the picture was one of acute diffuse hepatitis with extensive hemorrhages. Good illustrations appended to this article show the histological picture in these very acute destructive processes, and also demonstrate the contrasting attempts of the liver to resist, with the production of nodular lesions. Stokes and Miller list as many as six possible endings to an infection by the virus of infective hepatitis, which cover all likely permutations from complete recovery to rapid death, and include the variations produced by recurrences.

The results of the researches of I. J. Wood and his associates just published in this journal<sup>2</sup> emphasize the importance of recurrences of hepatitis, and while describing the serious disturbances of liver structure and function which may occur in this disease, yet hold out hope even for patients suffering from a prolonged illness due to this virus. Neither they nor Stokes and Miller have attempted to differentiate between the causes of infective hepatitis and homologous serum jaundice, as has been recently suggested overseas. This is probably wise; even to speak of "Virus A" and "Virus B" is to make an assumption that is not yet proven. Earnest study of this problem should

<sup>1</sup> *The Quarterly Journal of Medicine*, October, 1947.

<sup>2</sup> *THE MEDICAL JOURNAL OF AUSTRALIA*, February 28, 1948.



be continued, not only by research workers, but also by those practitioners who have to look after occasional patients with a long and trying illness due to this cause. The work of the team from Melbourne has shown how some help as to prognosis can be gained by chemical tests of liver function, and has indicated the lines along which treatment should proceed. It is to be hoped that experiences such as those in Burma may be rare, but it is comforting to know that a partial prophylaxis of one of the forms of hepatic sclerosis may not be entirely impossible.

#### DISSEMINATED SCLEROSIS.

A BODY exists in the United States, the National Multiple Sclerosis Society, whose object is the advancement of research on multiple sclerosis or, as it is more usually called in this country, disseminated sclerosis. Essential knowledge of the nature and treatment of this disease is still very limited, but the National Multiple Sclerosis Society has had prepared an article<sup>1</sup> which summarizes in a useful fashion recent information regarding diagnosis and treatment. It may be of interest here to outline the main aspects of treatment discussed.

It is pointed out that no specific cause and no specific treatment are known. During the acute phase of the disease a large proportion of axis cylinders may be destroyed, though a spontaneous tendency to recovery is usually seen subsequently, and this fact has to be borne in mind. The first aspect of treatment advocated is "morale building". The patient tends to be apprehensive and a right attitude by the medical attendant is vital; the problem is to enable the patient to cope with and to overcome the disability which the disease presents, and the medical attendant, after assessing the patient's capacity to deal with the problem, should set out to be positive and helpful while encouraging the patient to meet the problem himself.

The second consideration is the avoidance of factors which are liable to precipitate attacks. Acute infections of all kinds are important, though not always easily avoided; foci of infection should be sought. The disease appears to be associated with cold, damp climates, and removal of the patient to a warm, dry climate may diminish relapses and even induce a remission. Pregnancy is undesirable as it often appears to precipitate first attacks or relapses. Fatigue, poor nutrition, emotional disturbances and chilling have all been found to play a part, though there is no good evidence that any specific dietary factor is significant. The role of injury in causation is hard to assess, but even trifling injuries such as lumbar puncture and venipuncture may precipitate attacks.

Rehabilitation and symptomatic treatment present a big field, but a good deal can be done for many patients. Physical therapy, aimed especially at muscular reeducation, may achieve remarkable results if carefully planned and carried out. Curare, in the right hands, has been useful in overcoming spasticity, in allowing release of the maximum motor power and in preventing contractures. Neostigmine, although pharmacologically opposed to curare, has been used in a similar manner. Various other drugs of no constant value have been tried. Vitamins are important apparently only if signs of deficiency are present. Constipation requires mild forms of treatment. Urinary retention may require tidal drainage, care being taken to combat infection; urgency and frequency of micturition may be helped by antispasmodics.

The final group of treatments is related to current theories of the disease. Various measures have been adopted to deal with infections (for example, by spirochete or virus) that have been suggested as a basis for the condition, but results are disappointing. Recent investigations have provided evidence that vascular obstruction, probably a thrombosis of venules, may be a link in the chain of causation of disseminated sclerosis, and the anticoagulant "Dicumarol" has been used for

treatment. The article deals in detail with this method, both as to procedure and factors involved, but it is emphasized that "Dicumarol" cannot be expected to produce improvement of symptoms, but appears merely to afford protection against serious future outbreaks. It may have to be administered indefinitely, even for the rest of the patient's life, and is not without danger. However, its use is certainly an interesting advance in the management of the disease. The use of vasodilating drugs is also in the experimental stage, but some effective results have been obtained. Inhalation of amyl nitrite and intravenous injections of papaverine hydrochloride have produced reduction in the scotomata which often occur in this disease and which are apparently due to constriction of retinal arterioles. The effect of vasodilators on other aspects of the condition are not so clear, but the article gives details of a method of administration of histamine employed at the Mayo Clinic. The results of histamine therapy are yet to be evaluated, but it is clear that it cannot undo damage already done; early diagnosis is essential if anything is to be expected from its use.

This report is an interesting example of the correlation and publicizing of up-to-date ideas on a particular subject without undue claims or bias. In a country so large as the United States the idea of having a central body to collect information and to stimulate ideas on one particular disease, particularly one so obscure as disseminated sclerosis, may well be fruitful.

#### REACTIONS TO BACTERIAL ANTIGENS.

THE mass administration of vaccines, more particularly typhoid-paratyphoid vaccine, and of tetanus toxoid during the last war with a minimum of serious reaction did a good deal to break down prejudice and fear in the lay mind. Diphtheria immunization is well established, there is a growing confidence in the use of pertussis vaccine, and more interest is being shown in the protective value of tetanus toxoid to the civilian. On the other hand, however, vaccines are sometimes administered empirically or at any rate with small scientific justification or control, and they have been the basis of deplorable commercial exploitation. Fear has given place to familiarity, and it is opportune to draw attention to a report published by the Council on Pharmacy and Chemistry of the American Medical Association, in which William E. Ehrlich discusses the significance of the tissue reactions caused by antigens.<sup>1</sup> Ehrlich describes in detail the reactions which follow the injection of vaccines and other antigens based on his own experiments and the reported work of others; he considers the effect at the site of injection, in the regional lymph glands, and, especially after intravenous injections, in the vascular connective tissue, more particularly of the liver, lungs and spleen. He makes it clear that there is a borderline, not always easy to determine, between benefit and damage; an optimum dosage of antigen produces a good antibody response, but a larger dose may depress the antibody response.

These findings provide food for thought. An editorial comment in the same journal points out that currently recommended dosages of bacterial vaccines may be close to the borderline between optimal immunizing and toxic quantities, as indicated by Ehrlich's work, so that the indiscriminate use of immunization procedures is not wise. If the value of the procedure is clear and the optimal dosage known, there need be no hesitation, but "the notion that a vaccine of unknown efficacy 'can't hurt the patient even if it does not help him' is hardly tenable". If the possibility of allergic responses in certain patients is added to the toxic effects mentioned, it becomes clear that the blind and unintelligent use of vaccines and similar antigenic materials can only do harm in the long run, both to the patient and to the reputation of a valuable prophylactic weapon.

<sup>1</sup>The Journal of the American Medical Association, November 1, 1947.

<sup>1</sup>The Journal of the American Medical Association, September 13, 1947.

## Abstracts from Medical Literature.

### THERAPEUTICS.

#### "Tridione" Therapy.

MEYER A. PERLSTEIN (*The American Journal of Psychiatry*, October, 1947) reviews 136 cases of treatment with "Tridione" of varied neurological manifestations observed over a period of two years. Most spectacular benefits were obtained in cases of *petit mal*, in which clinical improvement was immediate. The electroencephalogram pattern often remained less abnormal after the cessation of the drug. Some cases of *grand mal* became less severe, others were aggravated by the use of "Tridione" as an adjuvant. Idiopathic types of *grand mal* and *petit mal* responded better than did organic lesions producing the same manifestations. "Tridione" was of use in cerebral palsy especially for reducing tension of the athetoid type. Toxic side effects were rare in children. In this series the majority of patients were children, twelve patients being between the ages of fifteen and twenty years and fifteen over the age of twenty years. The incidence of toxicity of the whole group was 10%, and 40% for the adult section.

#### Penicillin and Neurosyphilis.

BARNHARD DATTNER, SAMUEL S. KAUFMAN AND EVAN W. THOMAS (*Archives of Neurology and Psychiatry*, October, 1947) treated 151 subjects of active neurosyphilis by intramuscular injections of penicillin, 40,000 units given every three hours until a total of 6,000,000 units had been given. They report that 90% of their patients responded satisfactorily, and of these 100 were followed up for twelve months.

#### Hypertension.

F. L. SELBY (*The Canadian Medical Association Journal*, October, 1947) discusses biochemical changes in hypertension. Recently the adrenal cortex, through its influence on electrolyte metabolism, has been studied as a factor in causing hypertension, rheumatic fever, nephrosclerosis and *periarteritis nodosa*. Treatment of subjects of Addison's disease or even of normal persons with desoxycorticosterone acetate may lead to increase of blood pressure. The accurate evaluation of adrenal influence is, however, extremely difficult, and attention in this study was mainly devoted to the sodium and chlorine ratio in the blood serum of 38 hypertensive patients who had no other disease. The amount of sodium was divided by the amount of chlorine and the results were plotted for seventeen normal subjects as well as thirty-eight hypertensives. It was shown that with an increase in diastolic blood pressure there was an increase in the sodium chlorine ratio in some patients. All hypertensive patients, regardless of biochemical findings or previous sympathectomy, were treated with ammonium chloride, specially coated, in doses of one and a half grammes given three times a day after meals and at bedtime, unless they had uræmia, acidosis or intolerance. Later

all patients were admitted to hospital for one night and given a "Sodium Amytal" test—three grains were given hourly for three hours and the blood pressure was taken every three hours till it returned to its original level. The tests were repeated every three months, and if there was no change after six to eight months, treatment was considered ineffectual. In general, patients with a high sodium:chlorine ratio responded better to ammonium chloride than those with normal ratios. Two patients with normal ratios who did not respond to ammonium chloride did well after sympathectomy, and a number of patients whose hypertension was not relieved by operation responded well to ammonium chloride. Optimal subjects for sympathectomy are those whose blood pressure is still labile, who show pronounced falls of blood pressure on treatment with "Sodium Amytal", tetraethyl ammonium chloride, anaesthesia *et cetera*. The best responses with ammonium chloride have been in patients with fixed diastolic blood pressure. Two cases are recorded of apparently dramatic recovery in severe hypertension with retinal hemorrhages. Absorption of ammonium chloride was not always satisfactory with tablets and better results were sometimes obtained with capsules.

#### Bacillary Infections of Urine.

G. CARROLL, H. N. ALLEN AND E. K. DOUBLY (*The Journal of the American Medical Association*, November 15, 1947) discuss the treatment of urinary infections. They found that many organisms were resistant to sulphonamides and penicillin, the main ones being *Pseudomonas aeruginosa*, a Gram-negative, motile organism rather like *Escherichia coli* in appearance. *Pseudomonas aeruginosa* is usually known as *Bacillus pyocyaneus* (blue pus). Thirty-nine patients with persistent infections due to this organism were treated with mandelic acid and streptomycin with good effect. Mandelic acid was most effective in acid urine and streptomycin in an alkaline medium. In-vitro tests of resistance of organisms to the different drugs were recommended.

#### Epilepsy.

A. E. LOSCALZO (*The Journal of the American Medical Association*, October 25, 1947) discusses the treatment of epilepsy with 3-methyl-5,5-phenyl-ethyl hydrantoin or "Mesantoin", and phenobarbital, the two drugs being used together. Toxic effects were very rare. Sixty-seven patients were studied, 35 males and 32 females. An average of four tablets (0.4 gramme) of "Mesantoin" and one and one-third grains of phenobarbital were given to patients daily. Slightly higher doses were given to some patients. The authors report good results in 60% of patients, all of whom had been treated previously with "Dilantin" and phenobarbital.

#### Anuria Treated by Peritoneal Irrigation.

LAURENCE A. GROSSMAN, EDWIN M. ORY AND DAN H. WILLOUGHBY (*The Journal of the American Medical Association*, October 4, 1947) discuss the treatment of renal failure by the substitution of an artificial kidney and present one patient with anuria of eight days' duration successfully treated by peritoneal irrigation. They point out that the employment of the peritoneum

as a dialyzing membrane constitutes a promising approach to the problem, but in the past had not been feasible owing to (i) the lack of a satisfactory lavage fluid that would not cause significant disturbance of water and electrolyte balance; (ii) the great susceptibility of the peritoneum to infection and the seriousness of such infection; (iii) the technical difficulties with clotting in carrying out the procedure. Recent developments have largely overcome these difficulties; a suitable fluid has been developed by Abbott and Shea, the use of strict asepsis and the newer antibiotics prevents and controls infection, while heparin reduces the formation of fibrin and has made continuous irrigation possible.

#### Antihistamine Drugs.

G. L. WALDBOTT (*The Journal of the American Medical Association*, September 27, 1947) states that urticaria, hay fever, asthma and migraine are said to be allergic manifestations due to release of histamine. The enzyme histaminase, commercialized as "Torantil", is valueless clinically. Increasing doses of histamine or allied substances such as "Hapamine" have not been successful in building up an immune substance against histamine. Recently certain phenolic ethers have been used, "Antistin", "Neoantergan", "Benadryl" and "Pyribenzamine Hydrochloride". These drugs counteract the effects of histamine by diminishing capillary permeability, raising blood pressure, preventing contraction of smooth muscle, and inhibiting increased lachrymal and salivary secretion. Allergic or serum sickness urticaria is relieved by 50 to 100 milligrammes of one of these drugs, but the symptoms recur in four or five hours. These drugs are most effective in the early stages of any of the above complaints; they are less effective in chronic or long-standing conditions. When infection occurs the drugs are of little use. In migraine they do no good. Irradiation sickness is said to be relieved by these drugs. With "Benadryl" and "Antistin" side effects occur, more than with "Pyribenzamine" and "Neoantergan", but all cause such symptoms. Drowsiness, giddiness, headaches, nausea, dry throat and muscular twitchings may occur. Prolonged administration caused no organic disease, but cough, urticaria or dermatitis might develop. Patients who take these drugs should be warned against the danger of drowsiness, especially in motor-car driving or similar employment.

C. H. A. WALTON (*The Canadian Medical Association Journal*, October, 1947) places "Pyribenzamine" first among the newer antihistamine drugs. He states that it was just as effective and much less toxic than "Benadryl" and "Antistin" in similar doses. The antihistamine drugs were most valuable in urticaria, in allergic dermatoses with itching, and in allergic rhinitis. The effects are short and are palliative only. The drugs do not cure the complaint.

M. H. LOVELESS AND H. BROWN (*The New England Journal of Medicine*, October 2, 1947) have compared the clinical effects of "Pyribenzamine" and "Benadryl"; 150 patients were treated with "Pyribenzamine" and 53 with "Benadryl". Urticaria and generalized allergic erythema with bronchospasm

were relieved in twenty minutes by ingesting 50 milligrammes of "Pyribenzamine". Generally asthma was not relieved. Allergic rhinitis or pollen hay fever responded well to both drugs, as did non-seasonal rhinitis. Both drugs seemed to act almost equally well. Ill effects were more frequent with "Benadryl"; these included drowsiness and sluggishness. Nausea, anorexia, epigastric distress, diarrhoea and abdominal colic were more frequent with "Pyribenzamine". Exhaustion, insomnia, headache and giddiness, numbness of lips and tongue and muscle twitchings occurred rarely.

## NEUROLOGY AND PSYCHIATRY.

### Therapeutic Pedagogy.

ALFRED A. STRAUSS (*The American Journal of Psychiatry*, July, 1947) states that special education is a programme of education adapted to the education of exceptional children. The fundamental principle is that each child is educated in keeping with his capacity, limitations and interests to achieve the happiest adjustment he can make in life. Normal education of the child requires adjustment to the society he lives in and the acquisition of a reasonable proficiency in fundamental subjects. The physically and mentally handicapped require in addition individual consideration, assistance where possible by various mechanical aids and special education to overcome their peculiarities. For example, hyperactive and easily distracted children benefit by small classes (maximum 12), separate desks facing the wall or placed sometimes in cubicles. Physical handling of an object will often help memory better than pointing to it. A number of right hemiplegic children who use their left hand in writing will benefit by a change to right-handedness. A minimum of proficiency in academic subjects must be expected from everyone and should be achieved with the greatest ease and with least frustration. Therapeutic pedagogy as described here has been valuable in the following types of subject: the cerebral palsied child, the mentally retarded child, the deaf child and the child with behaviour maladjustment.

### Shock Therapy in Consulting Rooms.

EDWARD F. KERMAN (*The Journal of Nervous and Mental Disease*, July, 1947) presents a series of 242 patients treated by shock therapy in the psychiatrist's consulting room. Of these 63% suffered from affective disorders; 31.5% were schizophrenics. One patient had a Parkinsonian syndrome, two were psychopaths. The author does not refer to anxiety states and believes that psychoneurotic patients are unsuited for shock therapy. The procedure is to commence with treatments on three days a week, to decrease treatments to twice a week and then to carry on for some weeks at one treatment a week. There was an improvement in 79% of the whole series. Only 15 or 6% of the total required subsequent treatment in hospital. It is contended that the avoidance of admission to hospital is beneficial and important to the patient, his family

and society. The author bases his argument on the results of treatment, the ill effects of the stigma of lunacy, the overcrowding and personnel shortage of State hospitals, the packed dormitories, the under-feeding, the absence of comforts and the mass of patients with chronic conditions who are a drag on therapy. It is agreed that preliminary admission to hospital may be necessary in some cases and that there must be at all times a close and working relationship between hospital and private psychiatrist.

### Electro-Narcosis.

ESTHER BOGEN TIETZ (*The Journal of Nervous and Mental Disease*, August, 1947) analyses the results of 710 treatments of 46 patients by electro-narcosis. She claims that the results confirm the value of this therapy in paranoid schizophrenia, and that it was effective in some psychoneuroses of long standing. She commences treatment with an initial current of 200 milliamperes, dropping to 60 or 70 milliamperes in thirty seconds. When breathing is established the current is increased until the narcotic level is reached. "Carbogen" and curare are used as routine measures. "Nembutal" is given to apprehensive patients. All patients receive intense vitamin therapy during each treatment.

### Prefrontal Lobotomy.

WALTER FREEMAN AND JAMES W. WATTS (*Archives of Neurology and Psychiatry*, October, 1947) review the results of their first twenty cases of leucotomy examined ten years later. They suggest that the frontal lobes are concerned especially with foresight and insight and that the emotional component associated with these functions is supplied by the thalamus. The operation of prefrontal lobotomy cuts off the emotional component of any ideas. The authors insist that prefrontal lobotomy is an operation of the last resort. It should be performed only on patients who no longer have a chance of recovery by other measures. The surgeon should be mindful of the changes in personality associated with it. At the same time it should not be done when the patient has given up fighting his disease. The most suitable patients are those with obsession-tension states and chronic anxiety syndromes. Depressions clear up in a good percentage of cases and schizophrenic states are modified if the patient is excited, resistive or very disturbed. Patients with organic disease of the brain seldom benefit. They suggest that this operation may be of use in relieving the long-standing pain associated with such physical disease as cancer.

### Psychiatry in the World Today.

WILLIAM C. MENNINGER (*The American Journal of Psychiatry*, September, 1947) states that the institution of the family must be the object of serious study by all those interested in mental health. The healthy development of the child depends upon the early home situation which should provide affection, good example and security. In America 44% of the marriages are childless and in 22% there is only one child. In 1945 there was one divorce for every two marriages in urban areas and one divorce for

every three marriages in the country at large. Psychiatrists diagnose illness and treat patients, but tend to ignore the social problems responsible for the condition; prejudices of race, colour, religion, problems of unemployment and housing shortages are the special concern of those who study the way men think, feel and behave. Psychiatric principles should permeate the teaching of all medicine. To this end psychiatry must be integrated with the rest of medicine, and increased provision for its teaching must be made in the curricula of medical schools. The greatest immediate need is for trained personnel—psychiatrists, clinical psychologists, psychiatric social workers, and psychiatric nurses. Preventive psychiatry offers the greatest scope and encouragement and demands organization and a survey of special problems in order to formulate a programme of action. Finally, medical statesmanship must be developed to present these recommendations to leaders in high councils in many fields of activity.

### Parkinsonian States.

JAMES W. HEATH (*Archives of Neurology and Psychiatry*, October, 1947) reviews the literature concerning the pathology of the Parkinsonian syndrome. Examination of all the cases reported reveals no constant pathological substrate to explain the clinical manifestations of Parkinsonism. This may be because the Parkinsonian state is complex rather than a single entity. The most frequent pathological changes were found in the *substantia nigra*, though this area was not involved in all cases with tremor. Lesions were found in many other areas of the brain including the cerebral cortex, basal ganglia *et cetera*, but the significance of these changes could not be accurately assessed.

### Nitrous Oxide Inhalation in Psychiatric Treatment.

H. LEHMANN AND C. BOS (*The American Journal of Psychiatry*, September, 1947) review the use of gaseous anaesthetics in psychiatry. They gave pure nitrous oxide to the point where respiration became rapid and regular and/or the eyes were turned downward and inward, that is, to the commencement of the stage of increased muscular tone; the nitrous oxide was then replaced by pure oxygen until colour was restored. The whole treatment lasted two to three minutes. A period of facilitation was followed by a period of relaxation and sedation. Sleep was usually improved the following night. The method was used for symptomatic relief of overactivity and restlessness in 44 psychotic patients. All showed a response to the treatment.

### Short Courses of Electric Shock Treatment.

N. SAVITSKY AND W. KARLINER (*The American Journal of Psychiatry*, September, 1947) report that of 100 cases mainly of affective disorders, in 34 a satisfactory remission followed five or less electric shock treatments. The rate of relapse in the latter was 16% as compared with the relapse rate of 22.8% in the 66 in which more than five treatments were given. The authors state that there is no proof that giving more treatments causes a more protracted remission.



## British Medical Association News.

### ANNUAL MEETING.

THE annual meeting of the New South Wales Branch of the British Medical Association was held at the Robert H. Todd Assembly Hall, British Medical Association House, 135, Macquarie Street, Sydney, on March 24, 1948, Dr. H. R. R. GRIEVE, the President, in the chair.

### ANNUAL REPORT OF THE COUNCIL.

On the nomination of Dr. W. H. Simmons, seconded by Dr. R. H. Macdonald, the annual report of the Council was received and adopted. The report is as follows:

The Council presents the following report on the work of the Branch for the year ended March 24, 1948.

### Membership.

The membership of the Branch is now 2,769, as against 2,624 at the date of the last report. The additions have included 195 elections, re-elections and resumptions, and 68 removals into the area of the Branch; while the losses have included 10 by resignation, 70 removals out of the area of the Branch, 14 by default in payment of subscription, and 24 by death. The losses by death were as follows: Dr. E. H. Staples, Dr. F. W. D. Collier, Dr. G. D. Menzies, Dr. J. D. R. Herlihy, Dr. E. W. Levings, O.B.E., Dr. F. C. Crossie, Dr. E. T. Thring, Dr. H. A. Sweetapple, Dr. C. B. Howse, Dr. J. B. McElhone, Dr. C. A. Cosgrove, Dr. T. W. Lipscomb, Sir Alexander MacCormick, Dr. H. A. Ridler, Dr. H. Huff Johnston, Dr. W. J. Stewart McKay, Dr. R. A. Du Val, D.S.C., Dr. A. P. Gunning, Dr. L. A. McLean, Dr. D. Gwynne Hughes, Dr. S. E. Jones, Dr. R. J. English, Dr. J. Walker Tomb, Dr. Edna L. Nelson.

### Obituary.

#### Thomas Walter Lipscomb.

In the death of Dr. Thomas W. Lipscomb the Association has suffered a great loss.

A member of the Council from 1913 to 1932, he was President in 1922 to 1923, Assistant Honorary Secretary in 1925, Joint Honorary Secretary of the Australasian Medical Congress, 1929, and representative of the Branch at the Annual Representative Meetings of the British Medical Association in 1924 and 1947. He was also a member of the Australasian Medical Publishing Company, Limited, being chairman of directors for some years.

Just prior to his death he was present at the inaugural meeting of the World Medical Association as delegate of the Federal Council of the British Medical Association in Australia. He also rendered great service to the New South Wales Post-Graduate Committee in Medicine during the period in which he acted as its chairman.

The deep sympathy of the Branch is extended to his family.

#### Sir Alexander MacCormick.

Much of the credit for the present standard of surgery in Australia must be given to the late Sir Alexander MacCormick, who passed away in Jersey, Channel Islands, on October 25, 1947, at the age of ninety-one years.

He was a member of Council for a number of years, being President in 1904.

The deep sympathy of the Branch is extended to his family.

### Meetings.

Ten ordinary meetings of the Branch (including the annual general meeting) and five extraordinary meetings of the Branch and nine clinical meetings were held. The average attendance was 69. Nine of the ordinary meetings were held in conjunction with meetings of special groups, namely: April 24, with the Section of Medicine; May 29, with the Section of Neurology, Psychiatry and Neurosurgery and the Section of Sociological Medicine; June 26, with the Section of Anaesthesia and the Section of Obstetrics and Gynaecology; July 31, with the Orthopaedic Group (British Medical Association); August 28, with the Section of Pathology and Bacteriology, the Section of Medicine and the Section of Surgery; September 25, with the Section of Neurology, Psychiatry and Neurosurgery and the Section of Medicine; October 30, with the Section of Paediatrics and the Section of Obstetrics and Gynaecology; November 27, with the Resident Medical Officers' Special Group; December

11, with the Section of Urology, the Section of Anaesthesia and the Section of Surgery.

The clinical meetings were held at the Royal Alexandra Hospital for Children, Royal Prince Alfred Hospital, Royal North Shore Hospital, Women's Hospital, Crown Street, Lewisham Hospital, Sydney Hospital, Saint Vincent's Hospital, Broughton Hall Psychiatric Clinic and Saint George Hospital.

The business of the meetings included eighteen papers, two addresses, numerous reports of cases, exhibits and demonstrations. At one extraordinary general meeting, Professor T. David Jones, C.B.E., M.Sc., Ph.D., gave an address on "Suppression of Dust in Mines", whilst at another extraordinary general meeting Sir Gordon Gordon Taylor, K.B.E., C.B.E., F.R.C.S., delivered an address on "The Debt of Surgical Science to Australia". At an extraordinary general meeting on November 7, 1947, the Medical Secretary presented the report of Council on "The Commonwealth Government's Plans for a National Medical Service". At the remaining two extraordinary general meetings amendments were made to By-Laws 25(g), 28(ii), 28(vii) and to By-Law 4(d).

### Representatives.

The Branch was represented as follows:

1. Council of the British Medical Association (1946-1949): Dr. Isaac Jones.
2. Annual Representative Meeting, British Medical Association: Dr. T. W. Lipscomb.
3. Federal Council of the British Medical Association in Australia: Dr. W. F. Simmons, Dr. H. R. R. Grieve, Dr. A. J. Murray, O.B.E., Dr. A. J. Collins, D.S.O., M.C.
4. Contract Practice Subcommittee of the Federal Council: Dr. H. R. R. Grieve.
5. Australasian Medical Publishing Company, Limited: Dr. W. F. Simmons, in succession to the late Dr. T. W. Lipscomb, Dr. L. F. Dods, Dr. W. L. Calov.
6. New South Wales Post-Graduate Committee in Medicine: Dr. A. C. Thomas, Dr. G. C. Willcocks, O.B.E., M.C.
7. Ophthalmic Association, Limited: Dr. Colin C. Ross.
8. The Flying Doctor Service of Australia: Representative, Dr. George Bell, O.B.E.; Deputy Representative, Dr. J. G. Hunter.
9. Council of the Bush Nursing Association: Dr. H. R. R. Grieve.
10. Hospitals Contribution Fund of New South Wales: Dr. Hugh Hunter.
11. Saint John Ambulance Association: Dr. H. R. R. Grieve.
12. Standards Association of Australia: (i) Institutional Supplies Committee, Dr. S. W. G. Ratcliff; (ii) Sectional Committee on Interior Illumination of Buildings, Dr. N. M. Macindoe; (iii) Committee on Standards of Laboratory Glassware and Volumetric Glassware, Dr. F. S. Hansman; (iv) Committee on Protective Glass for Welding, Dr. J. A. F. Flynn.
13. Medical Officers' Relief Fund (Federal): Local Committee of Management for New South Wales, Dr. E. H. M. Stephen, Dr. A. J. Murray, O.B.E., Dr. A. J. Collins, D.S.O., M.C.
14. Medical Appointments Advisory Committee (Hospitals Commission of New South Wales): Dr. L. A. Dey.
15. Special Departmental Committee for the Investigation of Maternal Deaths: Dr. E. A. Tivey.
16. Recreation and Leadership Movement: Professor Harvey Sutton.
17. Council of the Royal Society for the Welfare of Mothers and Babies: Sir Robert Wade, Dr. E. H. M. Stephen.
18. New South Wales Medical Board: Dr. J. R. Ryan.
19. Workers' Educational Association: Dr. R. A. M. Allen, M.C.
20. New South Wales Institute of Hospital Almoners: Dr. R. A. R. Green.
21. Council of Education: Dr. A. J. Collins, D.S.O., M.C.
22. Society of Laboratory Technicians of Australasia: Dr. E. F. Thomson.
23. Medical Finance, Limited, Board of Directors: Dr. E. A. Tivey, Dr. R. Jeremy, Dr. A. C. Thomas, Dr. George Bell, O.B.E., Dr. G. C. Halliday.
24. New South Wales Institute of Dietitians: Dr. H. R. R. Grieve.
25. Coordinating Council for the Physically Handicapped: Dr. R. A. R. Green.
26. Road Safety Council of New South Wales: Dr. H. R. R. Grieve.
27. Federal Medical War Relief Fund: Local Committee of Management, Dr. A. J. Collins, D.S.O., M.C., Dr. A. C. Thomas, Dr. A. J. Murray, O.B.E.

28. Road Safety Council of New South Wales: (i) Committee for the Determination of Visual Standards for Motor Drivers, Dr. N. McA. Gregg; (ii) Committee for the Determination of Physical Fitness of Drivers of Motor Vehicles, Dr. J. H. Halliday.
29. Florence Nightingale Memorial Committee of Australia: Dr. B. T. Edye.

#### Council.

(a) The attendance of members of the Council and of the Standing Committees was as set out in the accompanying table.

(b) The representatives of the Local Associations of Members appointed on the invitation of the Council to attend the regular quarterly meetings of the Council were as follows: Dr. E. P. Dark (Blue Mountains), Dr. L. S. Woods (Border), Dr. R. Segal (Canterbury-Bankstown), Dr. G. N. M. Aitkens (Central Western), Dr. R. L. Douglas (Eastern District), Dr. S. G. Nelson (Eastern Suburbs), Dr. F. P. M. Solling (Hunter Valley), Dr. G. F. Elliott (Illawarra Suburbs), Dr. T. S. Douglas (Northern District), Dr. J. R. Ryan (North-Eastern), Dr. A. L. Caselberg (South-Eastern), Dr. C. H. Jaede (South Sydney), Dr. E. S. Stuckey (Warringah District).

#### Vice-Presidents, Article 56.

In appreciation of his long and distinguished service to the Association, the Council has much pleasure in nominating Dr. A. J. Collins, D.S.O., M.C., for appointment as a vice-president at the annual meeting.

#### Library.

Dr. J. Kempson Maddox was appointed to the position of Honorary Librarian.

Visitors to the library .....	7390
Books lent to members .....	1314
Journals lent to members .....	5249
Books added to the library .....	174
Journals added to the library .....	22

The Association is pleased to record its appreciation of donations received from the following: the Editor, THE MEDICAL JOURNAL OF AUSTRALIA, Public Health Department, United States Information Library, Senior Medical Year Students, Department of Labour and National Service, Commonwealth X-Ray and Radium Laboratory, Canberra, Australian Army Office, London, Commonwealth Industrial Gases, Limited, World Citizens' Association, Fisher Library, Australian Orthopaedic Association, Urological Society of Australasia, Adelaide Children's Hospital, Ophthalmological Society of New Zealand (British Medical Association), Royal Australasian College of Surgeons, Royal Australasian College of Physicians, Post-Graduate Committee in Medicine in the University of Sydney, Royal Prince Alfred Hospital, Ophthalmological Society of Australia (British Medical Association), Mayo Clinic, Rochester, International Labour Office, Dr. V. M. Coppleston, Dr. M. S. S. Earlam, Dr. M. R.

Flynn, Dr. E. P. Blashki, Dr. I. M. Friedman, Dr. H. B. Harwood, Dr. C. R. Hodgson, Dr. T. Dixon Hughes, Dr. J. K. Maddox, Professor B. T. Mayes, Dr. C. E. Percy, Dr. Lambert Rogers, Dr. Eva Shipton, Dr. E. H. Stokes, Dr. J. Walker Tomb, Dr. R. Worrall, the Section of Radiology, the Section of Obstetrics and Gynaecology, the Section of Medicine and the Section of Pathology and Bacteriology, and Dr. T. Y. Nelson for the sum of £15 15s.

#### Affiliated Local Associations of Members.

Blue Mountains (affiliated 1944): *Chairman*, Dr. P. Macarthur; *Honorary Secretary*, Dr. N. Larkins. Membership, 23. Four meetings were held.

Border (affiliated 1908): *Chairman*, Dr. R. A. Robertson; *Honorary Secretary*, Dr. F. G. Favaloro. Membership, 17. One meeting was held.

Broken Hill (affiliated 1942): *Chairman*, Dr. S. P. Barnett; *Honorary Secretary*, Dr. R. M. Hains. Membership, 15. Eleven meetings were held.

Canterbury-Bankstown (affiliated 1930): *Chairman*, Dr. H. A. Annetts; *Honorary Secretary*, Dr. J. T. St. Leger Moss. Membership, 34. Three meetings were held.

Central Northern (affiliated 1910): *Chairman*, Dr. T. Hamilton; *Honorary Secretary*, Dr. E. J. Egan. Membership, 74. Six meetings were held.

Central Southern (affiliated 1909): *Honorary Secretary*, Dr. J. P. Lyttle.

Central Western (affiliated 1910): *Chairman*, Dr. G. M. Blaxland; *Honorary Secretary*, Dr. K. S. M. Brown. Membership, 51. Three meetings were held.

Eastern District (affiliated 1913): *Chairman*, Dr. M. E. H. Elliott; *Honorary Secretary*, Dr. R. L. Douglas. Membership, 33. Three meetings were held.

Eastern Suburbs (affiliated 1911): *Chairman*, Dr. S. G. Nelson; *Honorary Secretary*, Dr. C. M. Burns. Membership, 125. Four meetings were held.

Far South Coast and Tablelands (affiliated 1935): *Chairman*, Dr. L. W. Wing; *Honorary Secretary*, Dr. J. F. Ireland. Membership, 16. Three meetings were held.

Hunter Valley (affiliated 1947): *Chairman*, Dr. J. B. W. Meredith; *Honorary Secretary*, Dr. F. P. M. Solling. Membership, 43. Three meetings were held.

Illawarra Suburbs (affiliated 1913): *Chairman*, Dr. C. R. Laverty; *Honorary Secretary*, Dr. G. W. Ashby. Membership, 68. Three meetings were held.

Kuring-gai District (affiliated 1929): *Chairman*, Dr. C. J. King; *Honorary Secretary*, Dr. J. Woolnough.

Northern District (affiliated 1911): *Chairman*, Dr. O. Barton; *Honorary Secretary*, Dr. R. J. Jackson. Membership, 73. Three meetings were held.

North-Eastern (affiliated 1913): *Chairman*, Dr. K. G. Lawrance; *Honorary Secretary*, Dr. M. R. Robertson. Membership, 58. Three meetings were held.

South-Eastern (affiliated 1914): *Chairman*, Dr. C. W. Luscombe; *Honorary Secretary*, Dr. M. C. McKinnon. Membership, 33. Six meetings were held.

#### ATTENDANCE AT COUNCIL AND STANDING COMMITTEE MEETINGS.

	Council.	Committees.			
		Executive and Finance.	Organization and Science.	Medical Politics.	Ethics.
BELL, GEORGE. Honorary Treasurer .. ..	12	10	2	9	1
BLACKBURN, SIR CHARLES .. ..	10	—	—	—	1
COLLINS, A. J. Honorary Secretary .. ..	8	—	—	6	—
DOUGLAS, T. S. .. ..	14	—	—	—	—
EDYE, B. T. .. ..	11	—	—	—	—
GRIEVE, H. R. R. President .. ..	14	11	2	6	—
HALLIDAY, G. C. .. ..	12	10	—	—	—
MACDONALD, R. H. .. ..	14	—	—	12	—
MCINTOSH, A. M. President-Elect .. ..	11	9	3	10	1
MADDOX, J. K. Honorary Librarian .. ..	9	7	—	—	—
MILLER, I. D. .. ..	13	—	3	—	—
MURRAY, A. J. .. ..	10	10	—	—	—
NELSON, T. Y. .. ..	10	—	3	9	—
NOAD, K. B. .. ..	11	—	3	—	—
RAWLE, K. C. T. .. ..	13	—	—	13	—
SIMMONS, W. F. .. ..	12	11	—	13	—
STENING, G. G. L. .. ..	10	—	—	—	—
THOMAS, A. C. Past President .. ..	12	10	—	—	—
TWEY, E. A. .. ..	11	—	—	11	—
WILLCOCKS, G. C. .. ..	10	—	—	—	1
Meetings held .. ..	14	12	3	13	1

\* Leave of absence from November, 1947, to March, 1948.

\* Leave of absence from January to March, 1948.

\* Leave of absence from February to March, 1948.

\* Full-time military service.

Southern District (affiliated 1909): *Chairman*, Dr. L. R. Lennon; *Honorary Secretary*, Dr. H. W. Austin.

South Sydney (affiliated 1909): *Chairman*, Dr. N. M. A. Alexander; *Honorary Secretary*, Dr. C. H. Jaede. Membership, 32. Three meetings were held.

Warringah District (affiliated 1929): *Chairman*, Dr. J. E. F. Deakin; *Honorary Secretary*, Dr. E. L. Davis. Membership, 113. Two meetings were held.

Western (affiliated 1908): *Chairman*, Dr. R. B. Carter; *Honorary Secretary*, Dr. S. R. Dawes. Membership, 79. Two meetings were held.

Western Suburbs (affiliated 1908): *Honorary Secretary*, Dr. R. J. J. Speight.

Permission was given in the latter part of the year to the formation of the Hunter Valley Medical Association. Its area, which was formerly a part of the Central Northern Medical Association, includes the Shires of Wallarobba, Patrick Plains, Kearsley, the Lower Hunter Shire and the City of Maitland.

#### Annual Meeting of Delegates.

The thirty-fourth annual meeting of delegates of the affiliated local associations of members with the Council was held on Friday, November 14, 1947.

The delegates present at the meeting were as follows: Blue Mountains, Dr. E. P. Dark; Border, Dr. L. S. Woods; Broken Hill, Dr. R. M. Hains; Central Southern, Dr. J. P. Lyttle; Central Northern, Dr. E. J. Egan; Central Western, Dr. G. N. M. Aitkens; Eastern Suburbs, Dr. C. M. Burns; Eastern District, Dr. R. L. Douglas; Far South Coast and Tablelands, Dr. L. W. Wing; Hunter Valley, Dr. T. R. Street; Illawarra Suburbs, Dr. G. F. Elliott; Kuring-gai District, Dr. G. L. Howe; Northern District, Dr. R. J. Jackson; Southern District, Dr. R. Cuttle; South-Eastern, Dr. A. L. Caselberg; South Sydney, Dr. C. H. Jaede; Warringah District, Dr. A. A. Lang; Western, Dr. R. D. Mulvey, M.C.; Western Suburbs, Dr. R. F. Back.

#### Special Groups for the Study of Special Branches of Medical Knowledge.

Allergy (inaugurated 1947): *Chairman*, Dr. Robert Steel; *Honorary Secretary*, Dr. Bernard Riley. Four meetings were held.

Anæsthesia (inaugurated 1934): *Chairman*, Dr. S. V. Marshall; *Honorary Secretary*, Dr. A. Distin Morgan. Four meetings were held.

Medical Literature and History (inaugurated 1925).

Medicine (inaugurated 1924): *Chairman*, Dr. W. Evans; *Honorary Secretary*, Dr. F. A. E. Lawes. Five meetings were held.

Neurology, Psychiatry and Neurosurgery (inaugurated 1924): *Chairman*, Dr. G. B. Wooster; *Honorary Secretary*, Dr. S. G. Sandes. Two meetings were held.

Obstetrics and Gynaecology (inaugurated 1925): *Chairman*, Dr. J. N. Chesterman; *Honorary Secretary*, Dr. F. N. Chenhall.

Orthopædic Group (inaugurated 1923): *Chairman*, Dr. F. H. McClements Callow; *Honorary Secretary*, Dr. C. C. McKellar. Six meetings were held.

Oto-Rhino-Laryngological Society of New South Wales (inaugurated 1924): *Chairman*, Dr. R. H. Bettington; *Honorary Secretary*, Dr. V. Bulteau. Six meetings were held.

Pædiatrics (inaugurated 1921): *Chairman*, Dr. L. A. Dey; *Honorary Secretary*, Dr. E. S. Stuckey. Six meetings were held.

Pathology and Bacteriology (inaugurated 1924): *Chairman*, Dr. E. F. Thomson; *Honorary Secretary*, Dr. G. V. Rudd. Eight meetings were held.

Preventive Medicine (inaugurated 1922): *Chairman*, Professor Harvey Sutton; *Honorary Secretary*, Dr. E. S. A. Meyers.

Radiology (inaugurated 1926): *Chairman*, Dr. A. T. Nisbet; *Honorary Secretary*, Dr. E. W. Frecker.

Resident Medical Officers' Special Group (inaugurated 1945): *Chairman*, Dr. R. H. Syred; *Honorary Secretary*, Dr. Stefania W. Siedlecky. Three meetings were held.

Sociological Medicine (inaugurated 1944): *Chairman*, Dr. D. J. Anderson; *Honorary Secretary*, Dr. I. D. R. Gardiner. Surgery (inaugurated 1925).

Urology (inaugurated 1940): *Chairman*, Dr. J. W. S. Laidley; *Honorary Secretary*, Dr. M. S. S. Earlam.

#### British Medical Association Lectures.

Lectures were arranged as follows:

Eastern District Medical Association, Bellingen, May 3, 1947, Dr. K. B. Noad, "Latest Advances in Treatment".

Northern District Medical Association, Armidale, December 7, 1947, Dr. K. B. Noad, "Recent Advances in Medicine".

Western Medical Association, Parkes, December 6, 1947, Dr. W. L. Macdonald, "Some Common and Unusual Orthopædic Conditions".

#### Articles of Association.

At an extraordinary general meeting held on February 17, 1947, new Articles of Association were substituted for Article 8, Article 37 and Article 38.

It was necessary to substitute a new Article 8 in order that the election of extraordinary members would be in conformity with the Articles of Association and the amended by-laws of the Parent Body.

Articles 37 and 38 were amended to provide for an amendment in the Constitution and method of election of Council. Under the new Constitution, Council will consist of one woman member to represent women members, one member in a public (government) medical service to represent members of the Association who are members in public (government) medical services, two members of country local associations to represent country local associations, two members of metropolitan local associations to represent metropolitan local associations and sixteen general members.

#### By-Laws.

On March 27, 1947, an amendment was made to By-Law 25(g) which deals with the position of a practitioner (medical examiner) examining on behalf of interested persons a patient under the care of another practitioner (medical attendant).

The amendment was to the effect that a medical examiner may, with the consent in writing of his employer and of the patient, furnish to the medical attendant a copy of his report or disclose to the medical attendant the contents of the same.

At the same meeting amendments were made to By-Law 28(ii) and 28(vii). The amendment to By-Law 28(ii) was for the purpose of providing for increased representation of the Branch on the Federal Council in accordance with the amended Constitution of this body. The amendment to By-Law 28(vii) provided that the contribution payable yearly by the Branch to the Federal Council to meet its expenses should not in any year exceed a total sum equal to twenty-one shillings per member of the Association.

On May 29, 1947, By-Law 4, relating to subscription, was amended to provide for a subscription rate of five pounds five shillings per annum for members who are whole-time members of the staffs of public hospitals and who are not otherwise entitled to a lower rate of subscription.

#### The Federal Council of the British Medical Association in Australia.

The Federal Council of the British Medical Association in Australia met in Melbourne on July 17, 18, 19 and 22, 1947, and March 11, 12 and 13, 1948. At the first meeting the Branch was represented by Dr. A. J. Collins, Dr. W. F. Simmons, Dr. H. R. R. Grieve and Dr. A. J. Murray, and at the second by Dr. H. R. R. Grieve, Dr. W. F. Simmons, Dr. A. J. Murray and Dr. A. C. Thomas.

#### Contract Practice.

##### Amendment of the Common Form of Agreement.

The Council is pleased to report that the Federal Common Form of Agreement with minor amendments was accepted by the Friendly Societies Association of New South Wales as the basis of agreement between friendly society lodge and medical officer. The new agreement came into operation on January 1, 1948.

#### Commonwealth Government's Plan for a National Medical Service.

With a view to placing before members the Commonwealth Government's plans for a national medical service, as revealed at a conference on July 24, 1947, the President and other members of Council accompanied the General Secretary of the Federal Council, who is also Secretary of the Branch, on a tour of the more important centres in the State, extending over a period of one month. Altogether 29 meetings were held and practically unanimously at every meeting resolutions were carried expressing strong opposition to the Government's plans as at present known. Meetings were also held in the areas of metropolitan local associations and at these meetings similar resolutions were passed. On November 7, 1947, a general meeting of the Association was held at which similar views were expressed, the Federal Council being notified accordingly.



### Pharmaceutical Benefits Act, 1947.

The Federal Council of the British Medical Association in Australia informed the Minister for Health that it was unable to recommend members to use the government prescription forms and formulary, as the *Pharmaceutical Benefits Act, 1947*, contained the following principles to which objection was taken, viz.:

1. The principle of discrimination as to their entitlement to pharmaceutical benefits between those members of the public whose requirements come within the limits of the formulary and those whose requirements are not so covered. It is this principle which involves an interference with the doctor's freedom of judgement in prescribing for his patient.
2. The principle of penal clauses, whereby a doctor who voluntarily uses the government forms and formulary finds himself not only restricted in his choice of the treatment which he may order for his patient, and subject to the intervention of a third party in the transaction, but also finds himself liable to heavy penalties if his procedure varies from that laid down by the Government.
3. The principle of control by a government department rather than by a corporate body.
4. The opportunity provided for the introduction of a nationalized medical service by means of an act not drawn up for that purpose.

The Federal Council, which intimated to the Government that it had no desire to deprive the public of the benefit of free medicine which the Government has seen fit to offer it, suggested that this object might still be achieved to the satisfaction of all concerned by government action on one of the following lines:

1. By amending the act so as to remove the principles objected to by the Federal Council.
2. By accepting a doctor's prescription on his own private prescription form as entitling the patient to free pharmaceutical benefits.

By this means the members of the profession would not be involved in the machinery of the act, which would then only concern the government, the public and the chemist.

The policy of the Federal Council was fully endorsed by the Council of the New South Wales Branch.

### Australasian Medical Congress (British Medical Association): Sixth Session.

The Sixth Session of the Australasian Medical Congress (British Medical Association) will be held at Perth, Western Australia, on August 15 to 21, 1948.

On the nomination of the Branch, Sir Charles Blackburn has been appointed a Vice-President of Congress and Dr. K. B. Noad, Honorary Local Secretary.

### Australasian Medical Publishing Company, Limited.

The Australasian Medical Publishing Company, Limited, was thanked by Council for its action in allowing a rebate over the last six years of 10s. *per annum* for each member who had totally relinquished civil practice for continuous full-time service in His Majesty's Forces.

Dr. W. F. Simmons was appointed as a representative of the Branch on the company in succession to the late Dr. T. W. Lipscomb.

### Medical Services Advisory Committee.

In the final year examination, 1947, 117 students graduated, and in the deferred examination a further 61. There was not much difficulty in finding hospital appointments for the former, but a problem arose in connexion with the latter. There were thirty more graduates than vacancies when the results of the deferred examinations were published. However, the Medical Services Advisory Committee was able to report that, with the exception of a very small number who undertook other work, all were eventually successful in obtaining appointments. The Council appreciates the help given by the Hospitals Commission of New South Wales and the various public hospitals in this matter.

### Department of Medical Sociology and Research.

The work of the department has been mainly in the preparation of broadcast talks, and a number of news commentaries, given over the national stations, and in providing information for the Press on health and medical subjects.

During the year a direct means of gauging the effect of the Association's broadcasting policy has offered itself in a

large correspondence which has grown up between members of the public and the department, through the Australian Broadcasting Commission. So many questions relating to subjects discussed in talks are submitted that for the past seven months it has been necessary to devote two daily talks each week to answering them. Almost all the letters express appreciation of help received in this respect from the "Spokesman of the British Medical Association". This would seem to justify the policy followed since the department was established of giving talks in which a high quality of material is aimed at, with a style of presentation as easy and interesting as possible, but with no seeking of mere popularity.

Extracts from talks have been published in *The A.B.C. Weekly*. The Printing Industry Employees' Union has asked permission to publish in full a recent (15-minute) talk on medical aspects of holidays. The "Kitchen Front" daily talks on nutrition and diet have now continued for six years, and to date more than 1800 have been given.

Some forty talks on health and nutrition have been given in a new series included in the Sunday morning programme "for business girls". Correspondence relating to this series indicates that it reaches a very general audience. The Broadcasting Commission has requested a new series of talks for inclusion in the week-day "Women's Session" on the care of children and other subjects.

### Repatriation Commission.

#### Medical Services to Widows, Widowed Mothers and Orphans of Deceased Members of the Armed Forces, 1939-1945 War.

The Agreement between the Federal Council of the British Medical Association in Australia and the Repatriation Commission for the provision of medical services to the widows, widowed mothers and orphans of deceased members of the armed forces, 1939-1945 war, was implemented in New South Wales on January 1, 1948.

### Women's Medical Society of New South Wales.

The Council has decided to give its support to the Women's Medical Society of New South Wales in an approach to the Public Service Board for the payment of salaries to female medical officers equivalent to that paid to male medical officers.

### Visiting Subsidized Medical Officers to Country Towns without Medical Services.

Following representations made by Council an assurance was given by the State Minister for Health that applications for the appointment of medical officers to render visiting services to country towns without medical services would be advertised in the Press of the adjoining towns. In the past the local medical committees have made appointments without previously calling for applications.

### Workers' Compensation Act.

#### Schedule "E".

It is the intention of Council to submit to the licensed insurers in the near future a proposal that the fees payable under Schedule "E" be amended. The proposed new fees have been submitted to local associations for consideration.

### Food Parcels for Great Britain.

The Council wishes to express its great appreciation of the excellent response made by members to its appeal for contributions to the fund inaugurated for the purpose of sending food parcels to beneficiaries of the Royal Medical Benevolent Fund, England. A sum of £543 has been collected. The numerous letters of thanks received from the recipients of parcels have been most gratifying.

### Medical Benefits Fund of New South Wales, Limited.

The fund was opened to the public on August 18, 1947. There has been a continual flow of applications for contributory membership, very few of which have been rejected. Already a number of claims have been met.

### British Medical Agency of New South Wales, Limited.

The annual meeting of the British Medical Agency of New South Wales, Limited, was held on October 7, 1947.

The directors had pleasure in submitting a report showing a satisfactory balance sheet and profit and loss account for the year ended June 30, 1947, after the necessary provision for taxation had been made.

In spite of disturbing economic circumstances the directors confirmed that the activities of the Agency were continuing with good results.



BRANCH ACCOUNT.  
Income and Expenditure Account for the Year ended December 31, 1947.

	£	s.	d.	£	s.	d.		£	s.	d.	£	s.	d.
To Salaries .....	4,980	9	8				By Subscriptions Received—						
" Rent—Offices <i>et cetera</i> .....	1,000	0	0				1947 .....	15,256	19	3			
" Printing and Stationery .....	514	1	7				1946 .....	197	8	0			
" Stamps and Telegrams .....	463	0	8				Previous Years .....	49	7	0			15,503 14 3
" Telephone .....	216	10	7				Less Proportion due to—						
" Code Address .....	2	4	6				British Medical Association .....	3,398	7	1			
" Travelling Expenses .....	290	1	10				THE MEDICAL JOURNAL OF AUSTRALIA .....	1,284	9	9			4,682 16 10
" Insurance .....	10	2	1										10,820 17 5
" Exchange and Bank Charges .....	12	14	8				" Interest .....	215	5	0			
" Refreshments—Meetings .....	23	1	6				" Rent Assembly Hall .....	109	17	6			
" Newspapers .....	7	9	0				" Broadcasting Fees .....	411	12	0			
" Sundry Petty Expenses .....	73	7	3				" Sales C.F.A. <i>et cetera</i> .....	12	8	5			
" Tea Money .....	72	4	7				" Refund Expenses, Federal Council .....	81	16	3			
" Federal Council .....	1,297	0	0				" Donations—Library .....	17	0	6			847 19 8
" Legal Expenses .....	20	9	6										
" Repairs—Furniture <i>et cetera</i> .....	41	10	7										
" Pay Roll Tax .....	113	19	8			9,143 7 8							
Depreciation—													
Library .....	246	3	6										
Office Furniture and Equipment .....	71	6	6										
Staff Superannuation Fund .....						317 10 0							
Transfer—General Reserve Fund .....						372 6 4							
Balance, being Surplus for the Year ended December 31, 1947, transferred to Accumulated Funds Account .....						1,250 0 0							
						585 13 1							
						£11,668 17 1							£11,668 17 1

way in which the Branch could recognize all that Dr. Collins had done, was to elect him as a vice-president. This was the highest honour that the Branch could confer on one of its members. The motion was put to the meeting and carried unanimously.

Dr. A. J. Collins thanked the members.

#### ELECTION OF OFFICE-BEARERS.

Dr. H. R. R. Grieve announced that the following had been elected members of the Council for the ensuing year:

*Elected by the General Body of Members.*—Dr. George Bell, Dr. L. B. Beveridge, Sir Charles Blackburn, Dr. W. S. Dawson, Dr. J. E. F. Deakin, Dr. B. T. Edye, Dr. G. C. Halliday, Dr. R. H. Macdonald, Dr. J. K. Maddox, Dr. Angus J. Murray, Dr. T. Y. Nelson, Dr. W. F. Simmonds, Dr. G. G. L. Stening, Dr. A. C. Thomas, Dr. E. F. Thomson, Dr. G. C. Willcocks.

*Elected by Women Members.*—Dr. Marie M. Hamilton.

*Elected by the Public (Government) Medical Service.*—Dr. H. H. Willis.

*Elected by Country Local Associations.*—Dr. T. S. Douglas, Dr. K. C. T. Rawle.

*Elected by Metropolitan Local Associations.*—Dr. J. F. Elliott, Dr. G. L. Howe.

Messrs. F. W. Duesbery and Company were appointed auditors for the ensuing year.

#### ELECTION OF REPRESENTATIVE AND DEPUTY REPRESENTATIVE OF THE BRANCH AT THE ANNUAL (1948) REPRESENTATIVE MEETING OF THE BRITISH MEDICAL ASSOCIATION.

On the motion of Dr. A. C. Thomas, seconded by Dr. G. C. Halliday, it was resolved that the appointment of representative and deputy representative in the Representative Body should be left in the hands of the Council.

#### APPOINTMENT OF TWO DELEGATES TO ATTEND THE ANNUAL MEETING (1948) OF THE BRITISH MEDICAL ASSOCIATION.

On the motion of Dr. A. C. Thomas, seconded by Dr. G. C. Halliday, it was resolved that the appointment of two delegates to attend the annual meeting (1948) of the British Medical Association should be left in the hands of the Council.

#### INCOMING PRESIDENT'S ADDRESS.

Colonel A. M. McIntosh delivered his address (see page 485). At the conclusion of the address Dr. G. C. Willcocks moved a vote of thanks to Colonel McIntosh for his address. Dr. A. J. Murray seconded the vote of thanks which was carried by acclamation.

#### INDUCTION OF PRESIDENT.

Dr. H. R. R. Grieve inducted the president for the year 1948-1949 (Colonel A. M. McIntosh). Colonel McIntosh thanked the members for his election.

### Post-Graduate Work.

#### THE MELBOURNE PERMANENT POST-GRADUATE COMMITTEE.

#### PROGRAMME FOR MAY, 1948.

THE Melbourne Permanent Post-Graduate Committee announces the following programme for May, 1948.

#### Course in Pædiatric Disorders.

Under the direction of Dr. J. W. Grieve, a course in pædiatric disorders, suitable for candidates for M.D. and M.R.A.C.P. examinations will be conducted at the Children's Hospital, Carlton, from 2 p.m. on Tuesdays and Thursdays:

May 11: "Fibrocystic Disease of the Pancreas", by Dr. J. W. Grieve and Dr. D. B. Pitt.

May 13: "Surgical Congenital Hearts and their Investigation", by Dr. Mostyn Powell.

May 18: "Clinical Problems in Infancy", by Dr. R. Southby.

May 20: "Advances in Hæmatology in Children", by Dr. J. Colebatch.

May 25: "Fluid Metabolism", by Dr. Howard Williams.

May 27: "Meningitis and its Treatment in Children", by Dr. S. Williams.

#### Classes at University for Higher Degrees and Diplomas.

Classes for candidates for all higher degrees and diplomas which commenced in March will be continued.

#### Demonstration at Geelong Hospital.

On Wednesday, May 12, at 8.30 p.m., Dr. H. Williams will demonstrate on "Recent Advances in Diseases of Children". Dr. N. W. Morris, "Belleville", Ryrie Street, Geelong, will make enrolments for this course.

#### Demonstration at Terang Hospital.

On Saturday, May 1, at 8 p.m., Dr. V. L. Collins will conduct a lecture demonstration on "Some Recent Advances



in Pediatrics". Dr. G. Watson, "Malahide", Camperdown, will make enrolments.

Enrolments for all Melbourne courses should be made with the Secretary of the Committee, College of Surgeons, Spring Street, Melbourne, C.1 (JM 1547-8).

#### THE UNIVERSITY OF QUEENSLAND POST-GRADUATE MEDICAL EDUCATION COMMITTEE.

##### COURSE IN BACTERIOLOGY.

THE University of Queensland Post-Graduate Medical Education Committee announces that a course in bacteriology particularly suited to candidates for higher surgical qualifications will be conducted by the committee. Full details are available on application to the Secretary, B.M.A. House, 225, Wickham Terrace, Brisbane. Telephone B 9513.

The course will consist of six sessions and the fee will be £3 3s.

### Congress Notes.

THE following information has been forwarded by the Executive Committee of the Sixth Session of the Australasian Medical Congress (British Medical Association) to be held at Perth from August 15 to 21, 1948.

#### Provisional Programme.

The provisional programme for Congress is as follows:

**Sunday, August 15.**—Morning: Congress church services. Afternoon: Golf. Local tours.

**Monday, August 16.**—Morning: Registration at University. Afternoon: Launch picnic. Tea parties. Cocktail parties. Evening: Inaugural meeting and President's reception.

**Tuesday, August 17.**—Morning: Scientific session. Afternoon: Scientific session. Evening: Cocktail parties. Buffet dinners.

**Wednesday, August 18.**—Morning: Scientific session. Afternoon: Golf cups for men and women. Evening: Congress lecture and university ceremony.

**Thursday, August 19.**—Morning: Scientific session. Afternoon: Scientific session. Evening: Congress dinner.

**Friday, August 20.**—Morning: Scientific session. Afternoon: Scientific session for some sections. Golf. Local tours. Evening: Buffet dinners. Congress ball.

**Saturday, August 21.**—Afternoon: Races at Belmont Park. Local tours. Evening: Trotting at Gloucester Park.

**Tuesday, August 24.**—Evening: Dance at Lake Karrinyup Country Club.

In addition to the formal functions listed above a number of private entertainments have been arranged.

Ample opportunity will be provided for visitors to see as much as possible of the beautiful country surrounding Perth. Daily tours have been arranged to places of interest. During the week following Congress longer tours occupying from two to six days have been arranged to districts lying further afield.

#### Country Tours.

Tours have been arranged to enable visitors to see something of Western Australia in springtime. It is hoped that many of the visitors will be able to remain in Western Australia for a few extra days to take advantage of these tours.

Any visitors who intend arriving in Western Australia prior to the Congress will be given every assistance by the Congress Entertainments Committee and the Western Australian Tourist Bureau to arrange additional tours.

A brief outline of the tours is as follows:

##### Tour Number 1.

District: South-West. Transport: Reso train. Distance: approximately 600 miles. Cost: £12. Leave Perth 8.30 p.m., Sunday, August 22. Return Perth 10.15 p.m., Thursday, August 26. A special train consisting of four sleeping cars, dining car, lounge car and shower car will tour the southern portion of this State through forest and agricultural districts. Halts will be made at different townships, where motor tours of the locality have been arranged.

##### Tour Number 2.

District: Southern. Transport: Tourist Bureau motor coach. Distance: 830 miles. Cost: £11 10s. Leave Perth 8.45 a.m., Sunday, August 22. Return Perth 5.30 p.m., Friday, August 27. The tour is through farming and pastoral districts to Albany and thence through forest and dairying country to Bunbury and back to Perth.

##### Tour Number 3.

District: Southern. Transport: Tourist Bureau motor coach. Distance: 730 miles. Cost: £9. Leave Perth 8.45 a.m., Monday, August 23. Return Perth Thursday, August 26. This tour follows the same route as Tour Number 2, but makes a shorter return to Perth.

##### Tour Number 4.

District: South-West. Transport: Tourist Bureau motor coach. Distance: 570 miles. Cost: £7 12s. 6d. Leave Perth 8.45 a.m., Sunday, August 22. Return Perth 6.15 p.m., Wednesday, August 25. This tour passes through Bunbury to the southern orchard and forest districts and returns via the coalmining town of Collie.

##### Tour Number 5.

District: South-West. Transport: Tourist Bureau motor coach. Distance: 570 miles. Cost: £7 12s. 6d. Leave Perth 8.45 a.m., Thursday, August 26. Return Perth 6.15 p.m., Sunday, August 29. This tour will be a repetition of Tour Number 4.

##### Tour Number 6.

District: Midlands and Geraldton. Transport: Motor coach. Distance: 740 miles. Cost: £9. Leave Perth 9 a.m., Wednesday, August 25. Return Perth 6 p.m., Saturday, August 28. This tour passes through districts to the north of Perth where the spring wildflowers appear earlier. It passes through the old Benedictine monastic settlement of New Norcia to Geraldton and its neighbouring farming districts.

##### Tour Number 7.

District: Abrolhos Islands. Transport: Aeroplane or road coach, and auxiliary ketch. Distance: 700 miles. Cost: £14 7s. 6d. Leave Perth early morning Tuesday, August 24. Return Perth evening, Sunday, August 29. This is the fisherman's tour. After arriving at Geraldton by aeroplane or road, visitors will be taken to the islands which lie some forty miles west of Geraldton. The islands are famed for their fish, both large and small, and the wild bird life. Dinghies and launches are available on the island without further cost. Accommodation is at a camp hostel.

##### Tour Number 8.

District: Kalgoorlie. Transport: Aeroplane. Distance: 800 miles. Cost: £13 (approximately). Leave Perth early morning, Wednesday, August 25. Return Perth evening, Thursday, August 26. Kalgoorlie is two hours by aeroplane (DC3) from Perth. Visitors will be entertained by the Kalgoorlie members of the British Medical Association. Those who desire to do so may remain in Kalgoorlie until Friday, August 27, and join the A.N.A. aeroplane for the eastern States on that day.

#### Income Tax Deductions for Members of Congress.

The Congress executive, through one of the local Members of Federal Parliament (Mr. Kim Beazley), has approached the Prime Minister asking whether *bona fide* expenses of members of Congress will be recognized as a taxation deduction.

The Federal Treasurer has replied to Mr. Beazley that all *bona fide* expenses will be allowed as deductions. The relevant section of this reply reads as follows: "These taxpayers will accordingly be entitled to a deduction in respect of the expenses incurred in attending the Congress, except to the extent that the expenses are outgoings of a capital, private or domestic nature. The Commissioner suggests that taxpayers who desire to claim a deduction in respect of expenses incurred in attending the Conference should supply with their returns of income details, under appropriate headings, of the nature and amount of the expenses incurred."

The reference to "outgoings of capital" applies to the usual disallowance of expenditure for the acquisition of a senior qualification. The Treasurer apparently thought that Congress might function in this direction.

It should be noted that deductions do not apply to employees, that is, salaried members of the profession.

**Dress.**

His Excellency the Lieutenant-Governor has approved of decorations being worn at all evening functions of Congress.

Miniature decorations are obtainable from Rankine and Dobbie Proprietary, Limited, Army Stores, 17, Centre Court, "Centreway", Collins Street, Melbourne, C.I.

**Correspondence.****STANDARDS AT THE UNIVERSITY OF SYDNEY MEDICAL SCHOOL.**

SIR: There is no need for my friend Mr. Bullock to defend past graduates of the Sydney Medical School from my criticism. I have none to offer.

At a recent meeting of the Council of the University of Melbourne I supported a decision to exclude some 48 medical students, who had passed the first year examinations, from the second year classes. These students were in excess of a quota previously determined in order to preserve a proper standard of instruction in the departments concerned. I stated, *inter alia*, that the University of Sydney had no power to enforce a quota, with the result that the overcrowding in it was too great to permit its former standard to be maintained, and that future medical graduates would be "half-baked".

I based my statement upon personal communications received from various members of the teaching staff of the University of Sydney. I shall at once apologize for making it if Mr. Bullock can assure me that there is no overcrowding in the medical course, despite the lack of a quota system.

If on the other hand my facts as stated are correct, I feel that it is justifiable to suggest that Mr. Bullock should face them.

Yours, etc.,

ALAN NEWTON.

272, Domain Road,  
South Yarra,  
Melbourne, S.E.1.  
March 23, 1948.

**A BASIC ROUTINE FOR POST-OPERATIVE TREATMENT AFTER LAPAROTOMY.**

SIR: Mr. Kinsella (THE MEDICAL JOURNAL OF AUSTRALIA, March 20, 1948) writes that no trouble will be caused by giving drinks early in the post-operative period if the quantity and quality are controlled. Well, sir, such has not been my experience. I have many times seen trouble follow the giving of drinks early in the post-operative period—even in cases in which, as Mr. Kinsella says, the partially obstructing inflammatory lesion lay in the right iliac fossa or in the pelvis. I have even seen paralytic ileus in cases in which I am sure there was no peritonitis. One case I saw with a friend of mine, an expert surgeon, followed upon a ten-minute clean appendicectomy.

I would think that the physiological "stand still" mentioned by Mr. Kinsella is the "greater or lesser degree of paralysis" of which I wrote. When a structure that normally moves to achieve an object decides to "stand still" after receiving an insult I would not think it accurate to describe the resulting condition as physiological. My phrase "greater or lesser degree of paralysis" gives, I would think, a more accurate picture of the state of affairs.

Mr. Kinsella's experience must have been happier than mine, which has been that, if drinks are given in the immediate post-operative period, some of the patients will be distended, not with the quantity of fluid absorbed, but with swallowed air—a very frequent evidence of abdominal discomfort. In addition, if a patient swallows air, not only will he become distended, but he may also become dehydrated if the condition lasts long enough. Why the small intestine fails is a matter for speculation, and, unfortunately, I know of no method of predicting in which patient it will. It is safer to regard them all as liable to do so and to withhold oral fluids until quite sure they will be absorbed.

I have advanced a routine which has worked very well. In fact, since using it gas pains (caused by the attempts of the small intestine to pass fluid or gas past a paralysed portion of itself) have been almost unknown and I have had

no personal cases of paralytic ileus. The basis on which this routine has been built may not be correct, but the method works and, as E. D. Churchill (*The Journal of Thoracic Surgery*, April, 1942, page 420) said, the art of surgery may be defined as making the correct guess on the basis of insufficient evidence.

The large bowel can easily absorb sufficient tap water to alleviate any thirst and, in the majority of cases, does it without causing any discomfort. Should there be discomfort, sufficient morphine given regularly dulls it to the point of extinction. Furthermore, the method is safe, even though not aesthetically attractive. I think it appropriate to say here that a nauseated patient has but a poor appreciation of aesthetics. In addition, it is easy and takes but the minimum of overlooking—nurses easily learn how fast the dripper should run. Finally, I regret that I am unable to agree with Mr. Kinsella's logical conclusion. The gastro-intestinal system of any patient in the early post-operative period is in a state of imbalance, and I feel that the violent vomiting of fluid that he has swallowed some short time previously will damage his aesthetic susceptibilities more than the passage of a small rectal catheter. Actually, aesthetics and convenience, as such, should not come in for consideration here at all.

In conclusion, I am grateful to Mr. Kinsella for the time he has spent on me, but my experiences have left me convinced of the advantages of a period of post-operative abstinence from oral fluids.

Yours, etc.,

LEO DOYLE.

45, Spring Street,  
Melbourne, C.I.  
March 25, 1948.

**EGG LAYING BY HENS.**

SIR: Readers who are interested in the above correspondence will be interested also in a letter in *The Australian Geographical Magazine (Walkabout)*, March 1, 1948, page 40. The subject is "Lambing Out of Season", by K. McC., Wadham College, Oxford. He tells of the work done by Mr. Neil Yeates, of Toowoomba, Queensland, Research Scholar at Cambridge University (School of Agriculture). The aim of the research was to persuade ewes to breed out of season by creating artificial seasonal conditions. The number of hours of daylight was extended by artificial light so that December 15 would resemble June 15. The ewes were served in May, and on the one hundred and forty-seventh day two lambs were born, one of each sex.

Another letter in the same issue of *Walkabout* tells how an observer watched the very immature young of a kangaroo reach the pouch. The mother had ejected her eight months old joey two days previously. She doubled herself and so made the distance shorter. She licked the fur and the tiny slug-like offspring worked its way up the licked path and into the pouch and attached itself to the nipple.

Yours, etc.,

GERTRUDE C. BUZZARD DUNLOP.

"Thurlow",  
6, Florence Street,  
Strathfield.  
April 7, 1948.

**Obituary.**

ALFRED JEFFERIS TURNER.

WE are indebted to Dr. D. Gifford Croll for the following appreciation of the late Dr. Alfred Jefferis Turner.

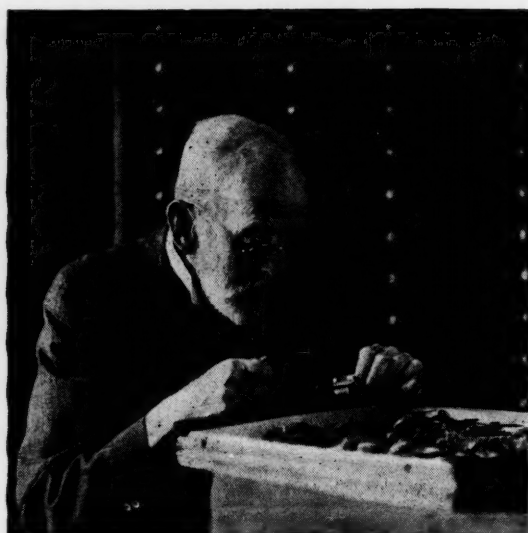
By the death of Dr. A. Jefferis Turner on December 29, 1947, Queensland loses her greatest physician. He lived so long beyond the allotted span that he has almost been forgotten and few remember what a power he was in his virile manhood. He influenced medical opinion not only in Queensland, but throughout Australia. President of the Children's Section of the Australasian Medical Congress held at Melbourne in 1908, he was again elected President when the Congress was held in New Zealand in 1927.

As a young resident medical officer, I had the inestimable privilege of serving under him, and I could not fail to appreciate his great erudition, his remarkable clinical acumen, his sound common sense, and above all his faculty of logical deduction.

The amount of work which he accomplished in a lifetime is almost unbelievable, and its value to Queensland inestimable. Whilst always an active clinician and keenly interested in medical politics and education, he nevertheless found time to contribute nearly a hundred articles on medical subjects, many of them of major importance, and also over a hundred articles on other scientific subjects, mostly entomological. Many of the former have been collected and presented by his widow to the library of the British Medical Association (Queensland Branch). They are there for all to read; the most that I can do here is to make a brief summary of his life and work.

After a brilliant course at London University College he qualified with the highest honours, M.B., M.R.C.S., 1884, and M.D., London, 1886.

He came to Queensland in 1889, was appointed medical officer to the Hospital for Sick Children, Brisbane, and thus commenced a career unique in the medical history of Queensland. Eighteen months later he published a review of the diseases then prevalent among children in Brisbane and the methods of treatment adopted. The worst of these was diphtheria, and it is pathetic to read of attempts to treat it without antitoxin. The mortality rate was 42.2%,



and in children under two years, 76.7%. He regrets that he cannot enthusiastically recommend any treatment whether for internal administration or local application. In a later paper, however, he strongly advocates the use of the intubation tube as an improvement upon tracheotomy.

Dissatisfied with the methods of treatment available and seeking better, in 1894 he visited Germany and studied in the laboratories of those two great medical scientists—Koch, the discoverer of the tubercle bacillus, and Behring, who discovered diphtheria antitoxin. He writes from Halle, Germany, to the editor of *The Australasian Medical Gazette* mentioning the discovery of diphtheria antitoxin.

He returned to Queensland in the following year and contributed two papers of the greatest importance: (a) "The Place of Bacteriology in Practical Medicine" and (b) "The Treatment of Disease by Antitoxins". He had evidently brought some of the diphtheria antitoxin with him and proceeded at once to use it in the Hospital for Sick Children. At last he had a weapon with which he could effectively strike. For the next few years several papers are devoted to the lessening in diphtheria mortality arising from the use of antitoxin from 42.2% prior to 1895 to 9.4% by 1899.

In 1892, conjointly with the late Dr. John Lockhart Gibson, he reported several cases of ankylostomiasis (one previous case had been reported by Dr. Hogg, of Goodna, in 1889), and suggested its prevalence among Queensland children. In 1895 he described it as a scourge affecting Queensland children, and advocated the use of thymol in adequate doses. Previously they had been using calomel, santonin, arsenic and thymol in small doses. He continued this work for some years, and later issued a pamphlet describing the nature of the disease, the route of entry, and the measures

necessary to prevent infection. This was sent to every town from which cases arrived at the Children's Hospital.

—In 1897 he described the "use and limitations of the curative powers of tetanus antitoxin", and in the same year he brought before the medical profession in Queensland the Widal test for the diagnosis of typhoid fever.

The great campaign against lead poisoning in Queensland children appears to have been a joint effort of A. Jefferis Turner and J. Lockhart Gibson. There was very close collaboration, and in articles written by either they frequently use the term "we" instead of "I". They first began to suspect lead poisoning among children in 1892, and ten cases were reported to the Intercolonial Medical Congress, but it was not until 1897 that they considered there were sufficient grounds upon which to make a pronouncement. In that year Dr. Turner published a paper in which he stated that lead poisoning was prevalent among Queensland children and described a number of cases. At the same time Dr. Gibson published a paper describing those with ocular symptoms, and gave his reasons for stating that they were due to plumbism. They were convinced that the source of the poison lay in the homes of the children, but beyond that it could not be traced. Every possible source was investigated—food, drink, toys—and special attention was paid to the tank water from galvanized iron tanks, but no proof was found. It was not until 1904, seven years later, that Dr. Gibson published a paper in *The Australasian Medical Gazette* stating that the source of the poison was the powdery white lead paint on veranda railings and fences. Since then his theory has been frequently criticized but never shaken, and any criticism was always bound to provoke a combined attack from Dr. Turner and Dr. Gibson.

In 1900, the year of the plague in Australia, Dr. Turner was appointed Health Officer for Northern and Central Queensland, and spent a stormy time among the denizens of North Queensland who did not seem to appreciate his advanced ideas upon hygiene. The following year he again visited England, and took the Diploma of Public Health (Cambridge). He also attended the International Congress for the Prevention of Tuberculosis held in London in 1901 as the representative of the Queensland Government. His report is the most comprehensive article on tuberculosis ever published in Queensland.

Before leaving England he addressed a letter to the Secretary of the Council of the British Medical Association, London, urging that provision should be made for the formation of a Federal Council of the Branches in Australia. He states that such action is needed and cannot be long delayed. In this he proved to be a true prophet. He returned to Australia burning with enthusiasm that steps should be taken for the reduction and ultimate extinction of tuberculosis in Queensland. Apparently he did not receive much support, but in 1904 he did succeed in having the notification of tuberculosis made compulsory.

In 1904 he was appointed visiting medical officer to the Diamantina Hospital for Incurable Diseases, and continued in that post until he retired in 1936, dearly beloved by patients and hospital staff.

In *The Journal of Tropical Medicine* in 1905 he published a comprehensive report of the dengue epidemic in Brisbane, and in 1906 a review of "The Food Factor in Disease", which makes interesting reading even today.

His presidential address to the British Medical Association (Queensland Branch) in 1906 is one that should be read by all who are interested in medical politics, contract practice and State medicine. In 1908 he turns to the subject of insects and diseases, and the first paper published by him upon the subject is both comprehensive and important for that date. He then advocated a campaign for the extermination of the mosquito from Brisbane, but, alas, in this matter he was a bit ahead of his time.

In the following year this versatile man is upon an entirely new subject, advocating the administration of ether by the open method which he was using for the first time in Brisbane. In 1910 he turned to the subject which was to occupy mainly the next thirty years of his life, that is, the reduction of infant mortality, and published a valuable paper upon the subject. He took a leading, if not principal, part in the formation of the Lady Chelmsford Milk Institute in 1909. This was designed to supply pasteurized milk to the infants of Brisbane. It failed after two years, not owing to any defect in the quality of the milk or to any lack of demand, in fact the demand was embarrassing, but owing to the lack of business experience necessary for providing and organizing milk delivery on a large scale. Turner's paper, in which he sets out the successes, failures and difficulties of such an undertaking, is well worth reading



by anyone who is interested in the provision of a good milk supply.

The outbreak of war in 1914 seriously disrupted his work. Intensely patriotic, he first of all undertook a great proportion of the work of those honorary medical officers of the Children's Hospital who had enlisted with the armed forces. Later, when resident medical officers became unobtainable, he returned to his job of 1890, and again resided at the Children's Hospital.

In 1916, when the referendum upon compulsory service failed, he could stand it no longer, so went to England and joined the Royal Army Medical Corps. Upon his return from the war one of his first acts was to establish an orthopaedic ward at the Children's Hospital and he acted as medical officer until a trained orthopaedist arrived in Brisbane.

From this time on his mind was concentrated upon the subject of infantile mortality. He was overjoyed to find that, during his absence, four baby clinics had been established in Brisbane under the direction of Miss Chatfield, Lady Superintendent of the Diamantina Hospital, with whom he had worked so long. He was appointed honorary medical officer to the Valley Baby Clinic and threw his whole energy into the work.

By 1925 the movement had grown to twenty-five centres. In 1926 Miss Chatfield retired, and Dr. Turner was appointed Director of Infant Welfare. Thus, at the age of sixty-five, when most men would be thinking of retiring, he set to work to build up a great organization upon the sound foundation already laid.

The Australasian Medical Congress was held in New Zealand in 1927, and Turner was again appointed President of the Children's Section. He chose as the subject of his presidential address "Infant Feeding". Of course, as was to be expected, he crossed swords immediately with the late Sir Truby King, but each had found a foe worthy of his steel and they parted the best of friends. He visited many infant welfare centres in New Zealand and acquired valuable information, although Sir Truby King did not quite succeed in converting him to "the true faith" which was the Plunkett system.

Upon his return to Queensland he set to work to expand the organization. He established an infant welfare railway car and greatly expanded the training of nurses in infant welfare. He travelled to every part of Queensland, and in ten years established seventy-five branches throughout the State.

In 1937 he retired and devoted the remaining ten years of his life to entomology, but he returned to medicine in 1938 to deliver the Jackson Lecture.

He died at the age of eighty-six years, cheerful and courageous and well content that his long life's work was done.

Dr. I. M. Mackerras, Director of the Queensland Institute of Medical Research, writes:

Some of the old generation of Australian entomologists were known almost as widely for their personal idiosyncrasies as for their scientific eminence. Turner undoubtedly was one of these, and he was, too, almost the last of that great generation of amateur naturalists who have contributed so much to our knowledge of the Australian fauna and flora. How these men found time to do all that they did is a mystery. Turner led a busy, progressive and productive professional life—he has left an indelible mark on infant welfare and preventive medicine in Queensland—and yet he gave to entomology more than could be reasonably expected of one man devoting his whole life to the subject.

He began to collect insects as soon as he arrived in Australia in 1888. At first, like most amateurs, he collected butterflies. Soon, however, he became interested in moths, characteristically being attracted to them by their more delicate beauty as well as by the wider field of discovery they offered. His work was, however, by no means superficial. He was not content with simple descriptions of new species, merely adding hundreds of names to the lists for others to elucidate later; he was actively concerned with evolution and classification, with orderly and systematic presentation of the knowledge he acquired, and he brought an extremely clear, logical and judicial mind to his work. The result was a long series of more than a hundred papers beginning with one on Microlepidoptera in the *Transactions of the Royal Society of South Australia* in 1894, and ending with a final paper on the Microlepidopteran family Oecophoridae in the *Proceedings of the Linnean Society of New South Wales* in 1947. He published in almost every scientific journal of Australia, and in some abroad, but most

of his major work appeared in the Linnean Society *Proceedings*. In these papers, building on the massive but rather unwieldy foundation laid by Meyrick, he erected a superstructure of knowledge, which not only added greatly to the number of known species, but maintained unity and design in the whole assemblage. His culminating paper was not his last, but his penultimate (in Volume 71 of the same *Proceedings*), in which he reviewed critically the whole classification of the Lepidoptera, adding his own contributions to improve the simplicity and logic of the system. One cannot resist quoting three brief, revealing sentences from his discussion of an early classification: "... this old work, which breathes a charm unknown to modern writings. . . . Just as the lineaments and character of a future adult are already apparent in a young child, so we may see here the early stages of our modern classification. Looked at with scientific impartiality, its excellencies outweigh its evident defects."

In the course of this work he collected all over the Commonwealth of Australia, received specimens from many other collectors, and shared material with his old associate, W. B. Barnard, so that the Turner and Barnard collections are among the most complete and beautifully arranged of any insect group in the country. In 1929 he entered into an arrangement with his friends, R. J. Tillyard and G. A. Waterhouse, by which his collection of over 50,000 specimens was to go on his death as a free gift to the museum of the Division of Economic Entomology (Council for Scientific and Industrial Research) at Canberra. The Commonwealth has thus acquired, without cost, a priceless and unique entomological possession which must have cost Turner several thousands of pounds to build up. It is appropriate that the companion Barnard collection should go to the Queensland Museum, where both Turner and Barnard did much of their work.

He was a Fellow of the Royal Entomological Society of London, and a member of the Royal Society of Queensland, Linnean Society of New South Wales, and other scientific bodies in this country. His wisdom and restraint played a significant part in moulding the policy of the Entomological Society of Queensland, when that now firmly established body was young and perhaps a little ambitious.

Turner, as a clear-headed, judicial worker, was one man, but as a person he seemed quite another. Many moths are well known for "effacing coloration", which enables them to disappear into the background. Turner, with his slight, almost translucent figure, quiet, small voice, and inability to pronounce his "R's", showed some of the effacing qualities of his moths—and yet his quaintness, his subtle humour, and some unusual quality of strength peeping through, made him far from inconspicuous. In some ways (as was Tillyard when out in the field) he was the perfect model of the unworldly, old-time entomologist so often depicted in caricatures. One story illustrated this: Waiting on a Brisbane suburban station one night, he spied a rare moth circling around a light; he climbed the lamp post, secured his specimen, and returned to the ground, where he found, to his mild surprise, "there was quite a crowd". That illustrates his indifference to his surroundings, but it illustrates also another of his qualities: he wanted that moth and he got it. During the war, when no ordinary mortal could procure transport, he secured a lorry to carry his precious collection from Brisbane to greater safety at Toowoomba, and he, an elderly, frail man, travelled all the way to look after it himself. His gentleness covered a real strength, which was necessarily more apparent in his public health work than in his pure research.

It would be ungracious to his memory to say that Turner's death was a loss to Australian entomology. He lived a full life, he completed the task he set himself, and he left, not only a collection which will be an indispensable tool for all future workers, but the results of a vast amount of original work clearly and systematically presented, so that future workers will not have to delve over the old ground again, but can step off from a clearly defined frontier into the territory that is still unexplored. His name and his work will live as long as zoology remains an orderly and systematic science. And a memory will remain, too, of kindly gentleness and whimsicality, which will still, for a while, be talked about when entomologists gather together.

ROBERT PERCIVAL HODGSON.

We regret to announce the death of Dr. Robert Percival Hodgson, which occurred on April 4, 1948, at Beverley, Western Australia.

## WALTER SHEFFIELD HARVISON.

WE regret to announce the death of Dr. Walter Sheffield Harvison, which occurred on April 5, 1948, at Asquith, New South Wales.

## ALBERT EDWARD PLATT.

WE regret to announce the death of Dr. Albert Edward Platt, which occurred on April 8, 1948, at Sydney.

## Nominations and Elections.

THE undermentioned have applied for election as members of the New South Wales Branch of the British Medical Association:

Spence, Robert Kinross, provisional registration, 1947 (Univ. Sydney), Balmain and District Hospital, Balmain.

McKenzie, William Lionel, provisional registration, 1947 (Univ. Sydney), 7, Springfield Avenue, Potts Point.

## AN APPEAL.

OWING to losses of mail during the recent war the journals listed below were not delivered to the library of the Medical Society of Victoria, and consequently sets of journals going back for many years are now incomplete. It would be very much appreciated if any medical practitioner in Australia able to supply the missing numbers would communicate with the Medical Secretary of the Victorian Branch of the British Medical Association at the Medical Society Hall, Albert Street, East Melbourne.

The following are the missing journals: *The American Journal of the Medical Sciences*, May, 1943; *Annals of Surgery*, November, 1940, January, 1942, June, 1942, and July, 1942; *Indian Medical Gazette*, January, 1943; *The Urologic and Cutaneous Review*, October, 1942; *Veneral Disease Information*, Number 1, 1941.

## Medical Appointments.

Dr. F. A. Aird has been appointed a member of the Dental Board of Victoria, in pursuance of the provisions of the *Medical Act*, 1928, of Victoria.

The following appointments have been made at the Royal Melbourne Hospital: Surgeons to In-Patients, Dr. J. B. Turner and Dr. Paul Jones; Surgeons to Out-Patients, Dr. J. B. Devine and Dr. D. R. Leslie; Allergist, Dr. P. W. Farmer.

## Books Received.

"The 1947 Year Book of Obstetrics and Gynecology", edited by J. P. Graenhill, B.S., M.D., F.A.C.S.; 1948. Chicago: The Year Book Publishers Incorporated. 7" x 4½", pp. 590, with many illustrations. Price: \$3.75.

"The 1947 Year Book of Orthopedics and Traumatic Surgery", edited by Edward L. Compere, M.D., F.A.C.S.; 1948. Chicago: The Year Book Publishers Incorporated. 7" x 4½", pp. 438, with many illustrations. Price: \$3.75.

"Dermatologic Therapy in General Practice", by Marlon B. Sulzberger, M.D., and Jack Wolf, M.D.; Third Edition; 1948. Chicago: The Year Book Publishers Incorporated. 8" x 5½", pp. 688, with many illustrations. Price: \$7.75.

"The 1947 Year Book of Dermatology and Syphilology", edited by Marlon B. Sulzberger, M.D., and Rudolf L. Baer, M.D.; 1948. Chicago: The Year Book Publishers Incorporated. 7" x 4½", pp. 604, with many illustrations. Price: \$3.75.

"Diseases of the Breast", by Sir Crisp English, K.C.M.G.; F.R.C.S.; 1948. London: J. and A. Churchill, Limited. 8½" x 5½", pp. 136. Price: 8s. 6d.

"The Psychology of the Adolescent", by Leta S. Hollingworth, Ph.D.; Second Edition; 1947. New York, Toronto and London: Staples Press, Limited. 8½" x 5½", pp. 188. Price: 10s. 6d.

## Diary for the Month.

- APRIL 19.—Victorian Branch, B.M.A.: Finance, House and Library Subcommittee.  
 APRIL 20.—New South Wales Branch, B.M.A.: Medical Politics Meeting.  
 APRIL 21.—Western Australian Branch, B.M.A.: General Meeting.  
 APRIL 22.—New South Wales Branch, B.M.A.: Clinical Meeting.  
 APRIL 22.—Victorian Branch, B.M.A.: Executive Meeting.  
 APRIL 23.—Queensland Branch, B.M.A.: Council Meeting.  
 APRIL 27.—New South Wales Branch, B.M.A.: Ethics Committee.  
 APRIL 28.—Victorian Branch, B.M.A.: Council Meeting.  
 APRIL 29.—New South Wales Branch, B.M.A.: Branch Meeting.  
 APRIL 29.—South Australian Branch, B.M.A.: Branch Meeting.  
 MAY 4.—New South Wales Branch, B.M.A.: Organization and Science Committee.  
 MAY 5.—Western Australian Branch, B.M.A.: Council Meeting.  
 MAY 5.—Victorian Branch, B.M.A.: Branch Meeting.  
 MAY 6.—South Australian Branch, B.M.A.: Council Meeting.  
 MAY 7.—Queensland Branch, B.M.A.: Branch Meeting.  
 MAY 11.—New South Wales Branch, B.M.A.: Executive and Finance Committee.

## Medical Appointments: Important Notice.

MEDICAL PRACTITIONERS are requested not to apply for any appointment mentioned below without having first communicated with the Honorary Secretary of the Branch concerned, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

*New South Wales Branch* (Honorary Secretary, 135, Macquarie Street, Sydney): Australian Natives' Association; Ashfield and District United Friendly Societies' Dispensary; Balmain United Friendly Societies' Dispensary; Leichhardt and Petersham United Friendly Societies' Dispensary; Manchester Unity Medical and Dispensing Institute, Oxford Street, Sydney; North Sydney Friendly Societies' Dispensary Limited; People's Prudential Assurance Company Limited; Phoenix Mutual Provident Society.

*Victorian Branch* (Honorary Secretary, Medical Society Hall, East Melbourne): Associated Medical Services Limited; all Institutes or Medical Dispensaries; Australian Prudential Association, Proprietary, Limited; Federated Mutual Medical Benefit Society; Mutual National Provident Club; National Provident Association; Hospital or other appointments outside Victoria.

*Queensland Branch* (Honorary Secretary, B.M.A. House, 225, Wickham Terrace, Brisbane, B.17): Brisbane Associated Friendly Societies' Medical Institute; Bundaberg Medical Institute; Brisbane City Council (Medical Officer of Health) Members accepting LODGE appointments and those desiring to accept appointments to any COUNTRY HOSPITAL or position outside Australia are advised, in their own interests, to submit a copy of their Agreement to the Council before signing.

*South Australian Branch* (Honorary Secretary, 178, North Terrace, Adelaide): All Lodge appointments in South Australia; all Contract Practice appointments in South Australia.

*Western Australian Branch* (Honorary Secretary, 205, Saint George's Terrace, Perth): Wiluna Hospital; all Contract Practice appointments in Western Australia. All government appointments with the exception of those of the Department of Public Health.

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